

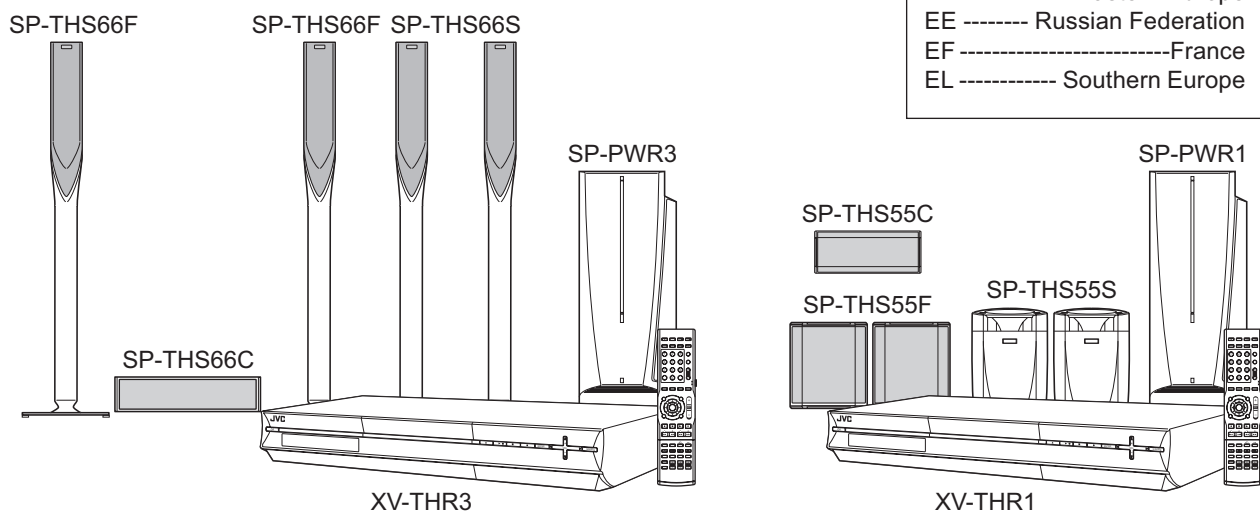
JVC

SCHEMATIC DIAGRAMS

DVD DIGITAL CINEMA SYSTEM

TH-R3, TH-R1

CD-ROM No.SML200508

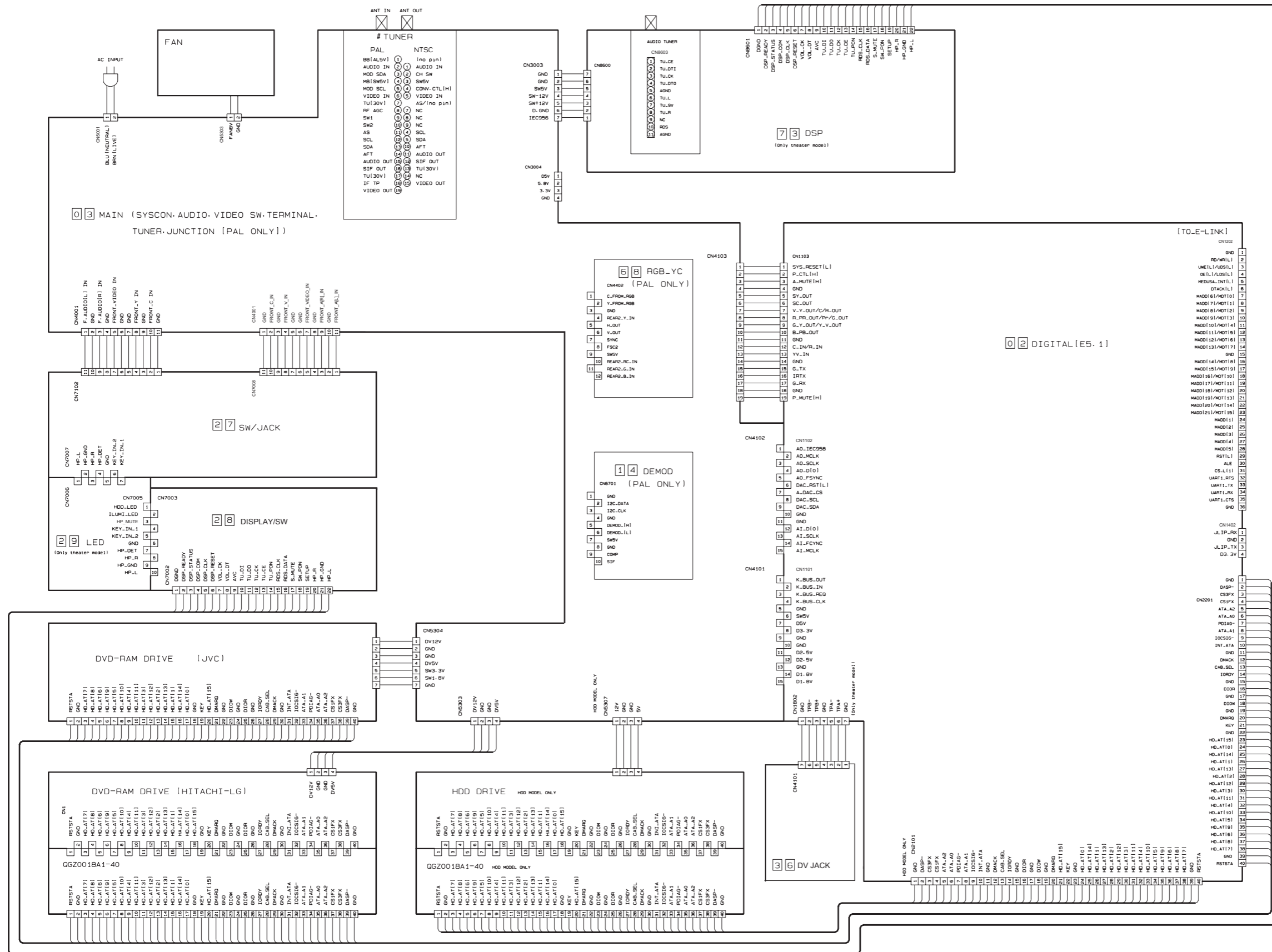


Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

Contents

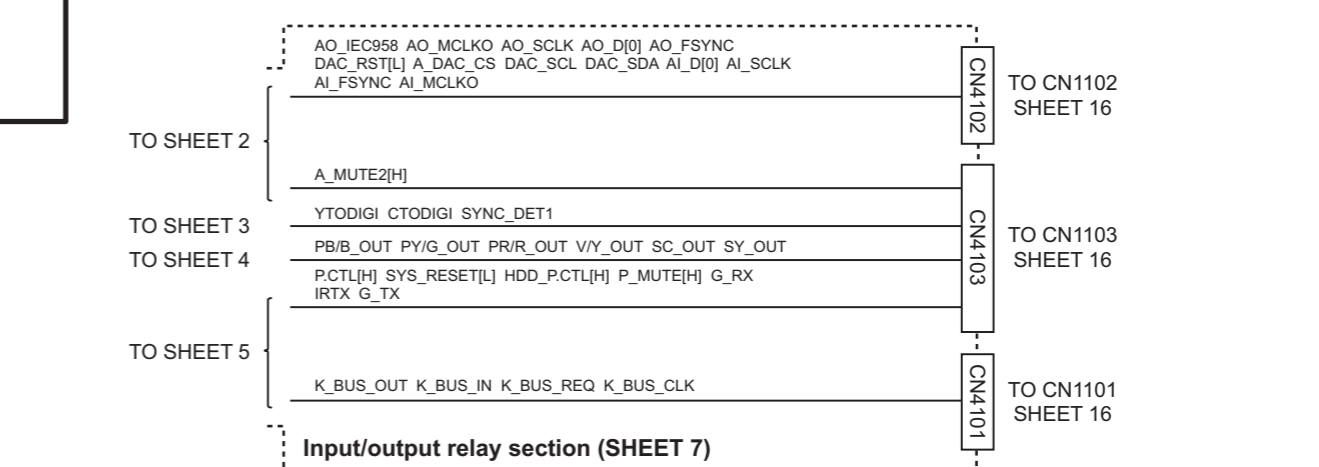
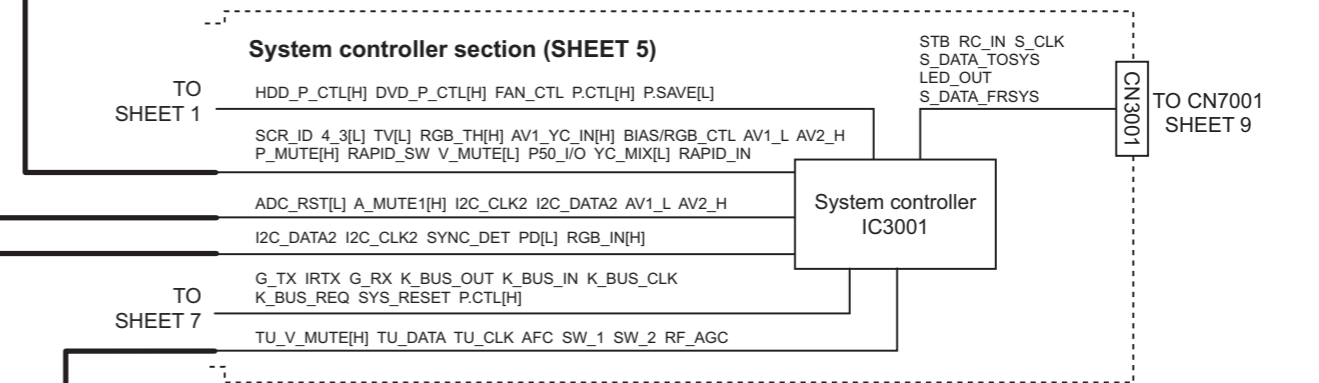
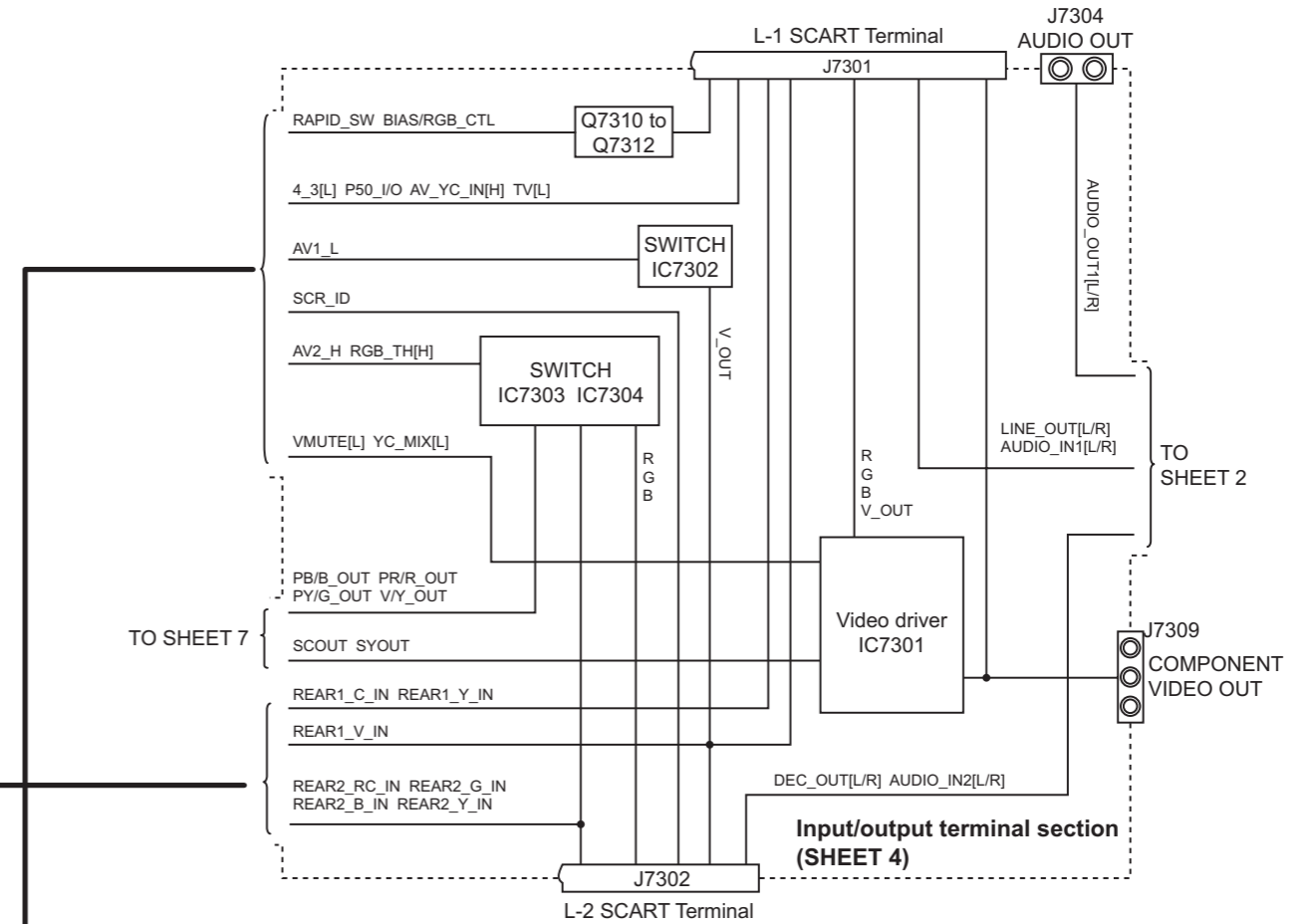
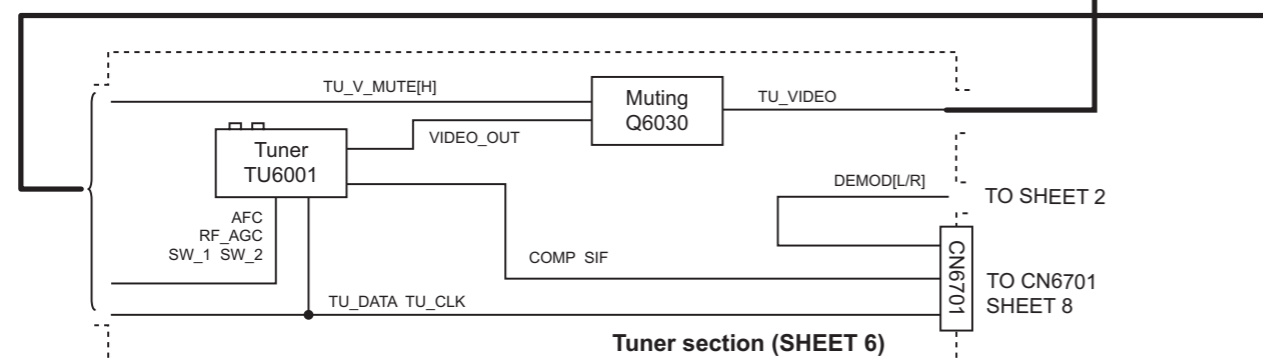
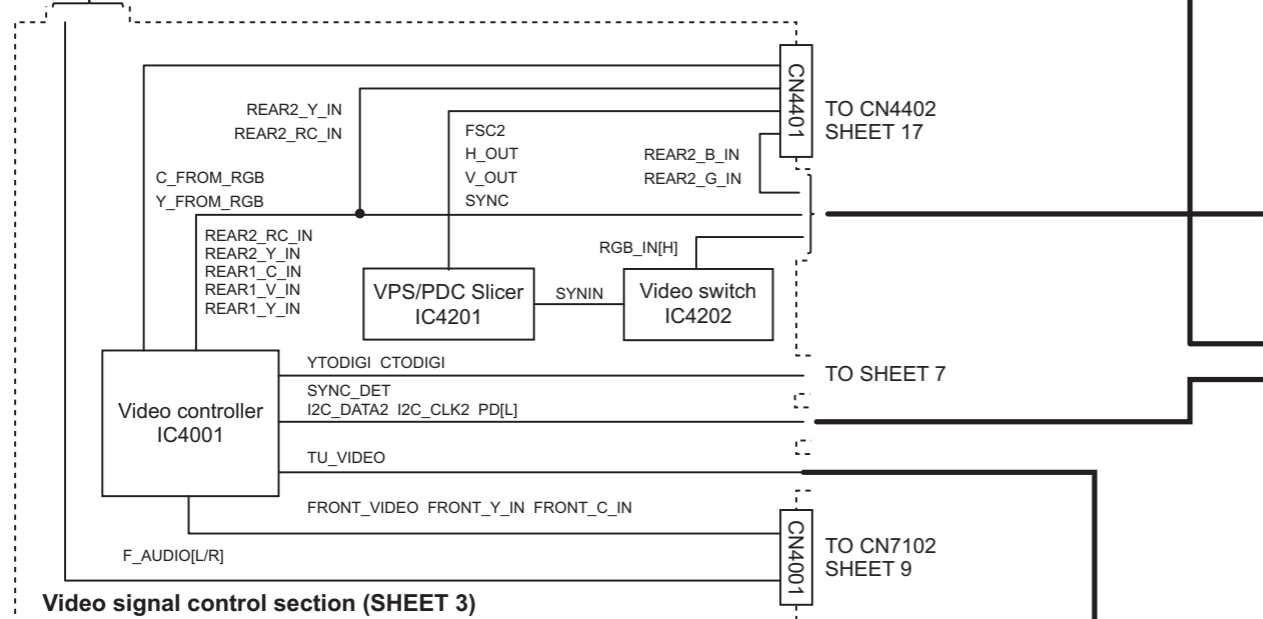
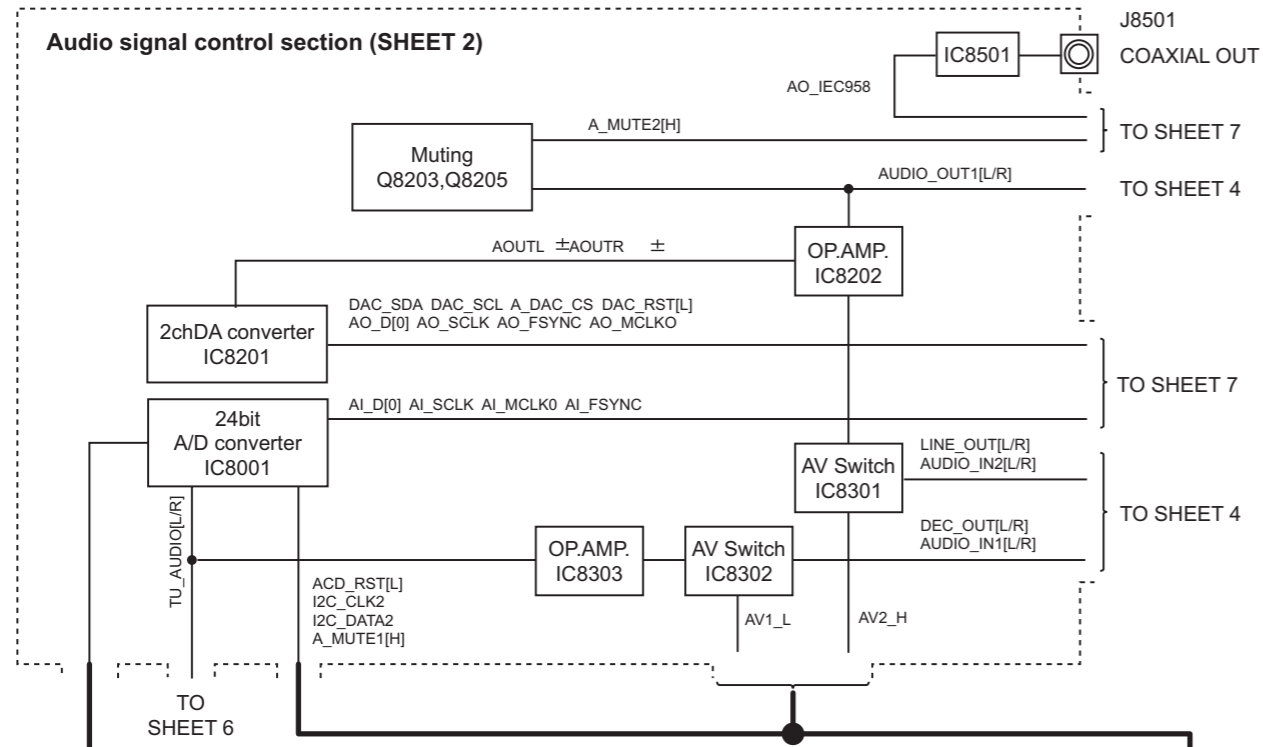
Wiring diagram	2-1
Block diagrams	2-2
Standard schematic diagrams	2-5
Printed circuit boards	2-26 to 30

Wiring diagram

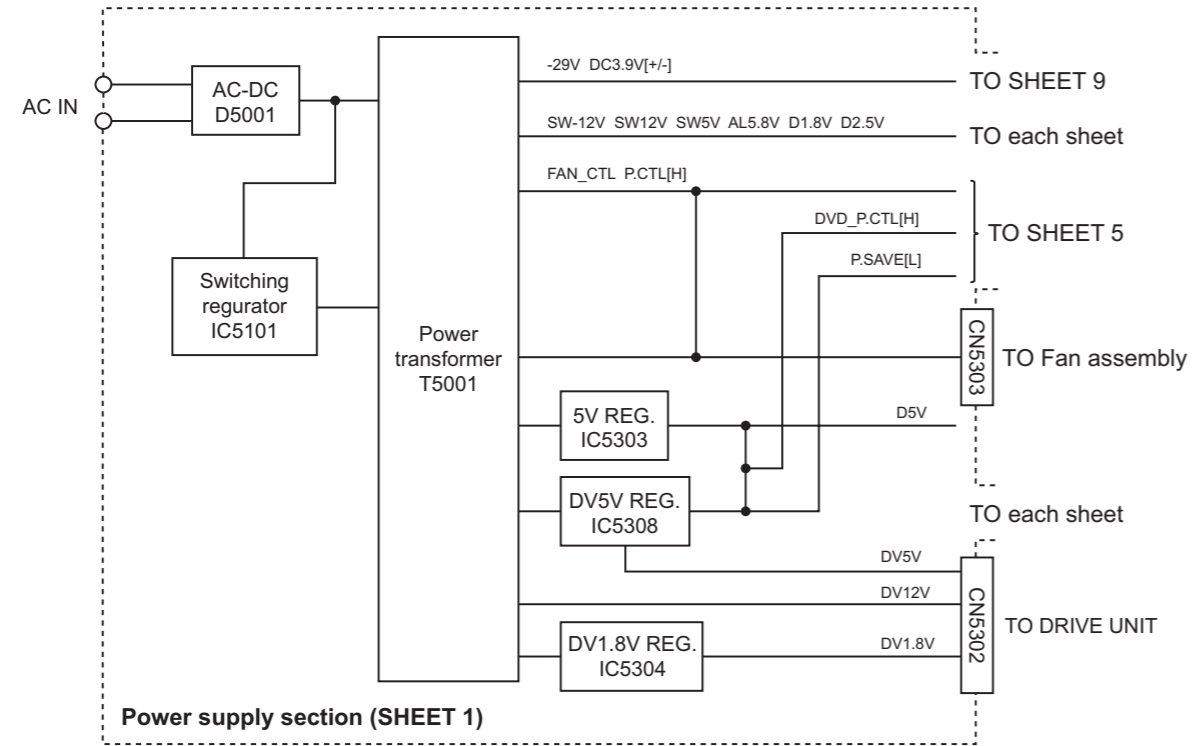


Block diagrams

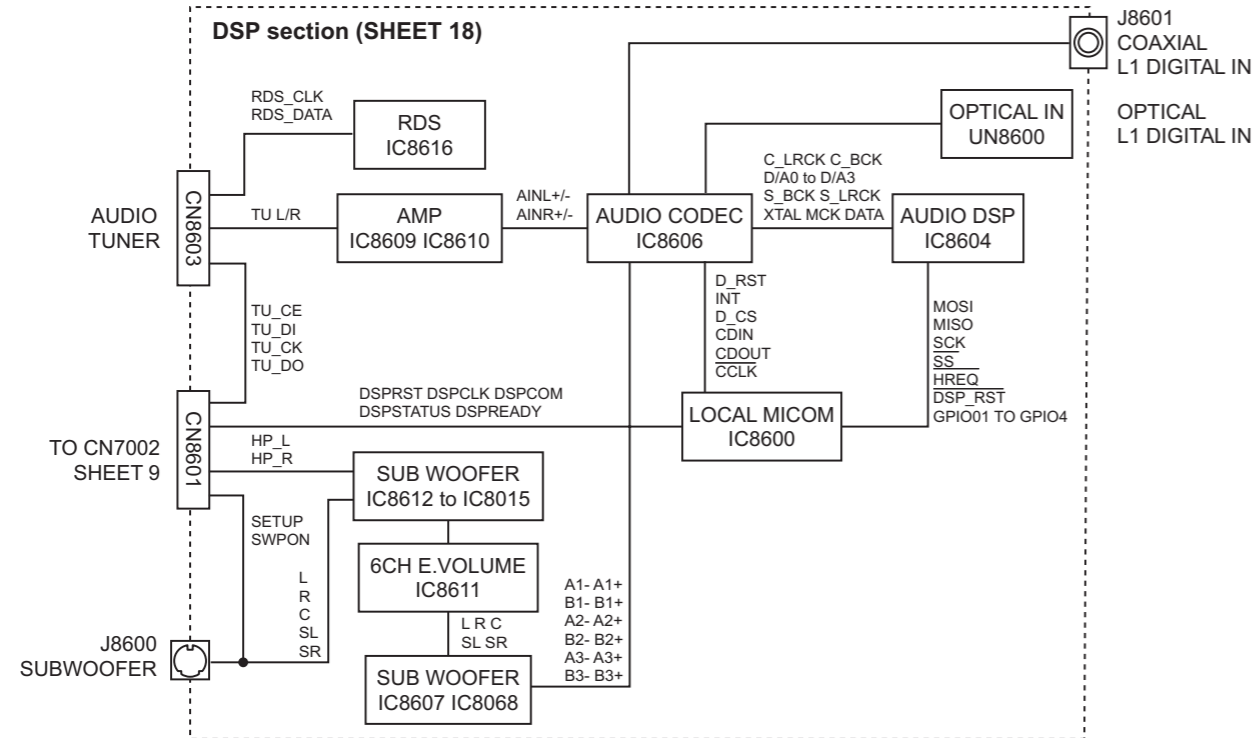
■ MAIN 0 3



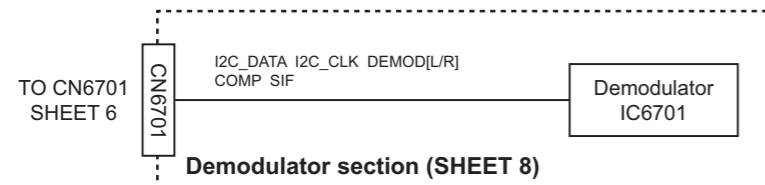
■ MAIN 0 3



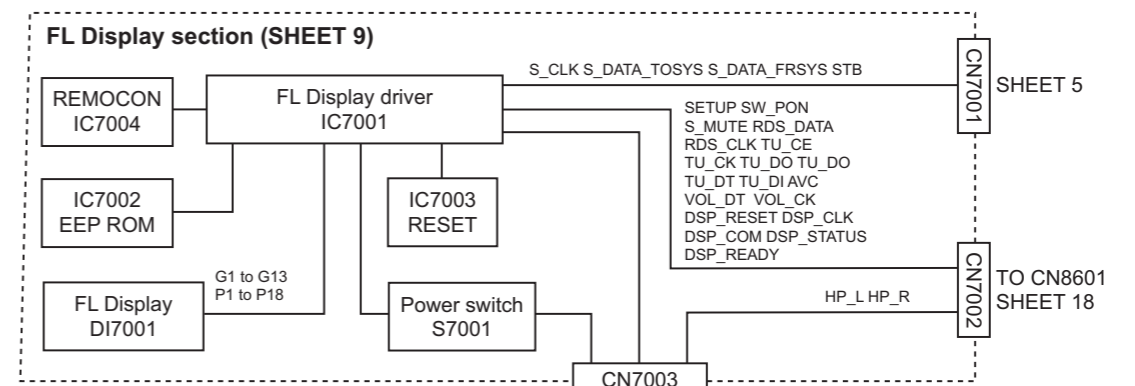
■ AUDIO DSP 7 3



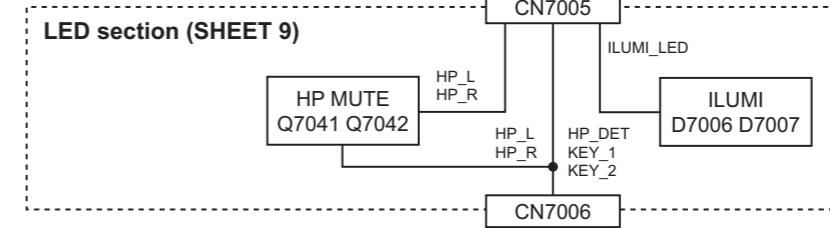
■ DEMODULATOR 1 4



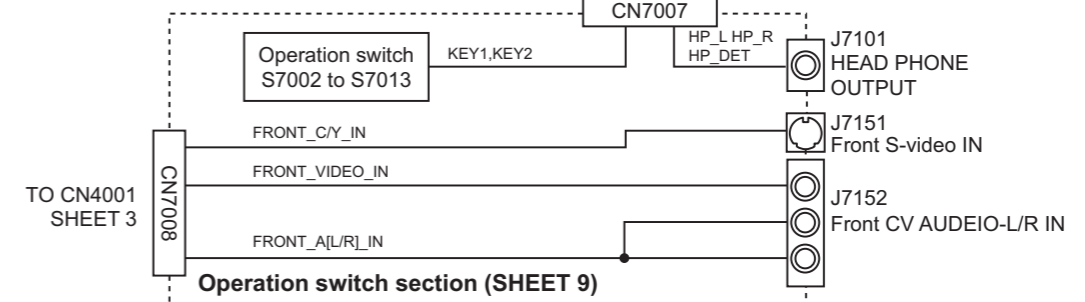
■ DISPLAY/SW 2 8



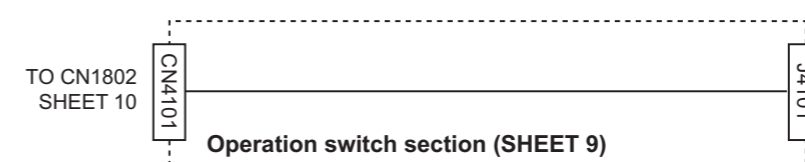
■ LED 2 9



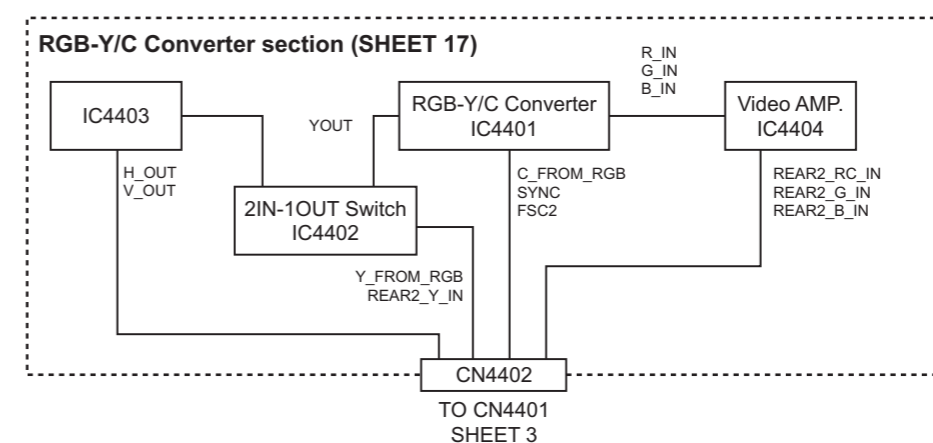
■ SW/JACK 2 7

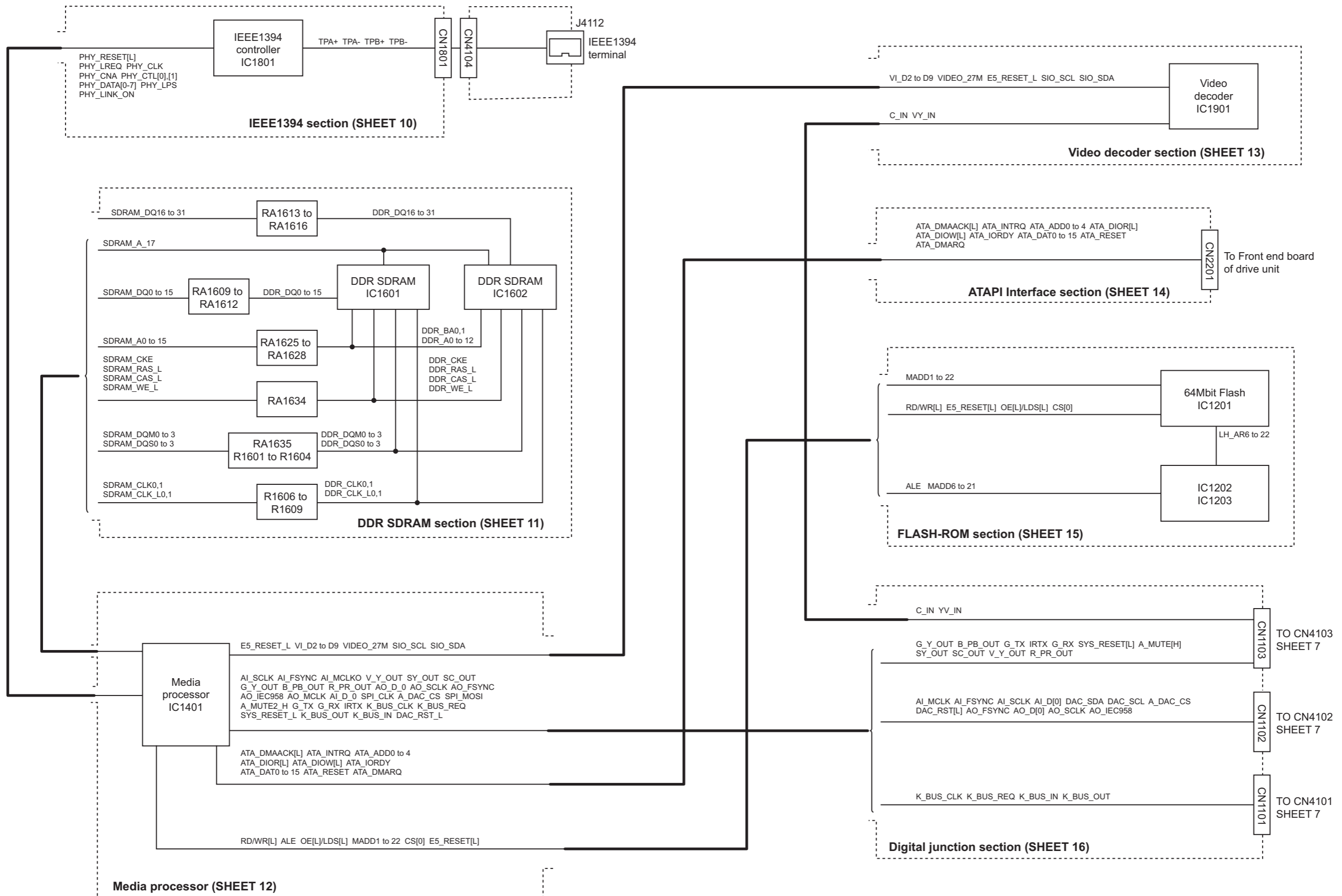


■ DV JACK 3 6



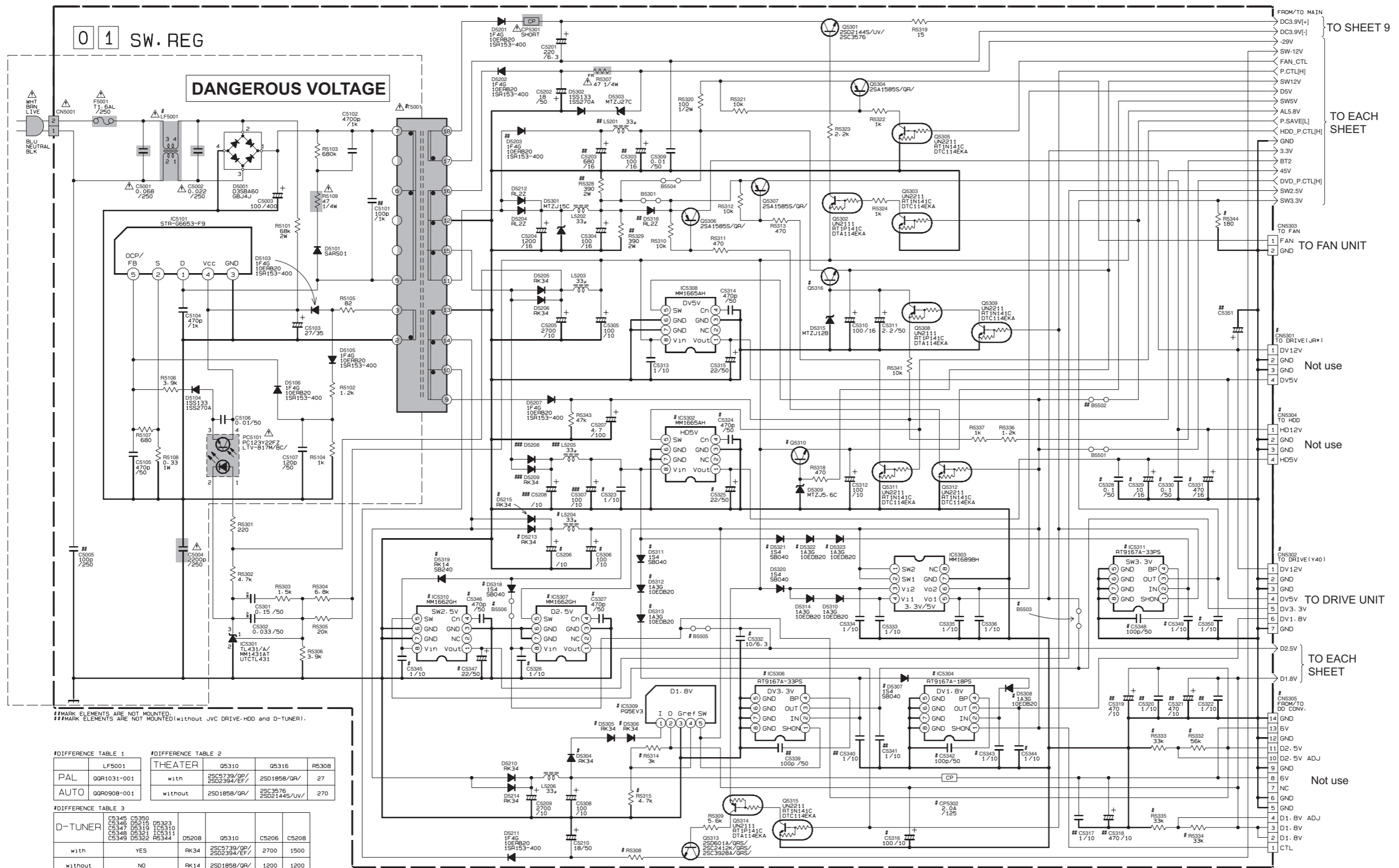
■ RGB_YC 6 8





Standard schematic diagrams

Power supply section



MARK ELEMENTS ARE NOT MOUNTED
 MARK ELEMENTS ARE NOT MOUNTED (without JVC DRIVE-HDD and D-TUNER1).

DIFFERENCE TABLE 1

	LF5001
PAL	QR1031-001
AUTO	QR0908-001

THEATER TABLE 2

	05310	05316	R5308
with	2SC5739/OP/ 2SD2394/EF/	2SD1858/GR/	27
without	2SD1858/GR/	2SC3676 2SD2144S/UV/	270

DIFFERENCE TABLE 3

	C5345	C5350	C5346	C5347	C5348	C5349	D5208	05310	C5206	C5208
D-TUNER	C5345	C5350	C5346	C5347	C5348	C5349	D5208	05310	C5206	C5208
with	YES	YES	YES	YES	YES	YES	2SC5739/OP/ 2SD2394/EF/	2700	1500	
without	NO	NO	NO	NO	NO	NO	RK14	2SD1858/GR/	1200	1200

DIFFERENCE TABLE 4

	B5505	C5359	CP5302	B5503	C5326	D5304	C5343	D5308	D5208	T5001
HDD	B5505	C5359	CP5302	B5503	C5326	D5304	C5343	D5308	D5208	T5001
with	YES	YES	YES	YES	YES	YES	YES	YES	RK34	Q0S0334-001
without	NO	NO	NO	NO	NO	NO	NO	NO	RK14 SB240	Q0S0333-001

DIFFERENCE TABLE 5

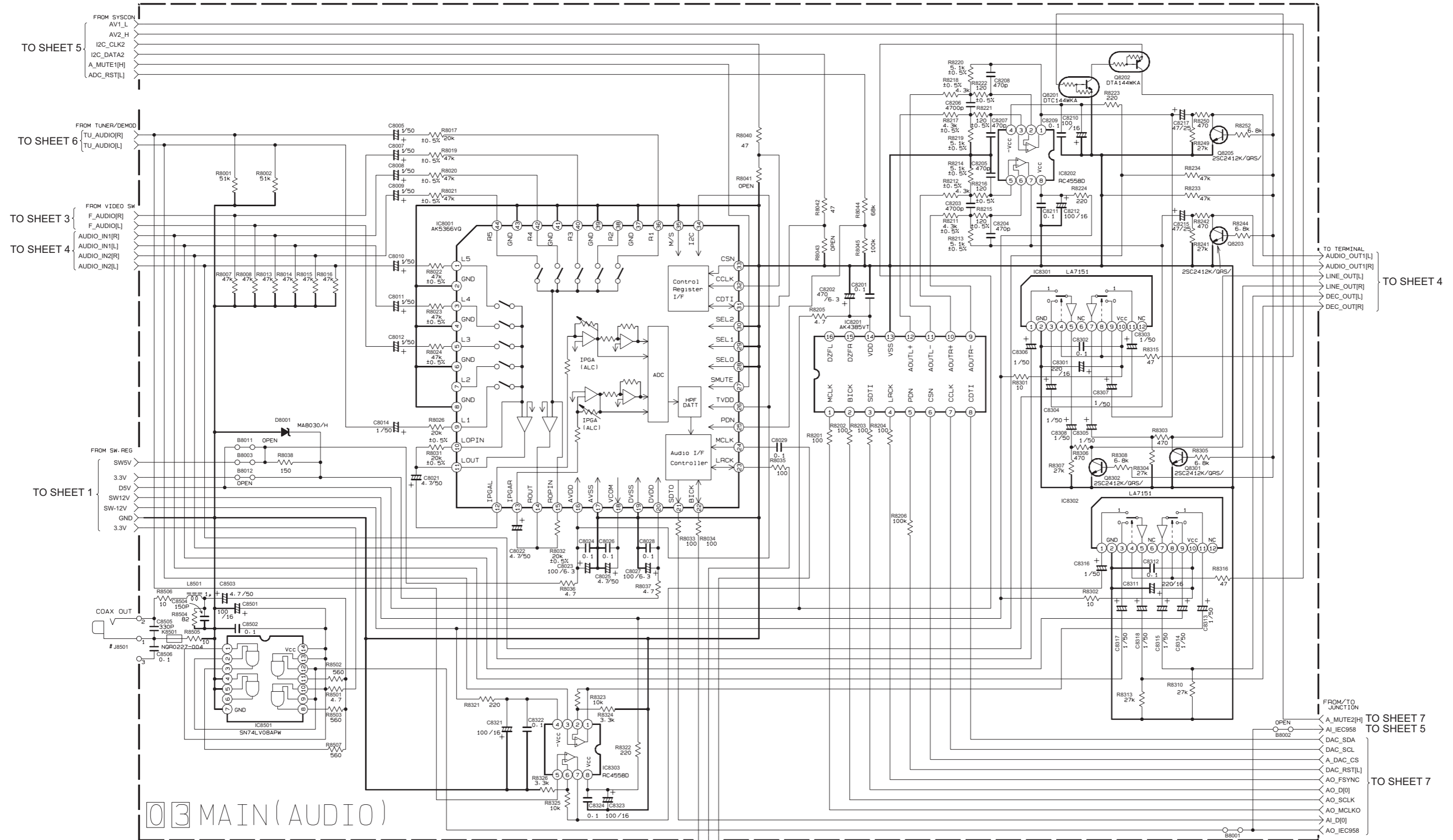
	DVD DRIVE	CN5301	C5342	D5308
JVC	NO	YES	C5342	D5308
JR*	YES	NO	C5344	D5312

Parts are safety assurance parts.
 When replacing those parts make sure to use the specified one.

NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

- ⊖ ELECTROLYTIC
- ⊖ CERAMIC
- ⊖ MYLER
- ⊖ NON POLAR

■ Audio signal control section

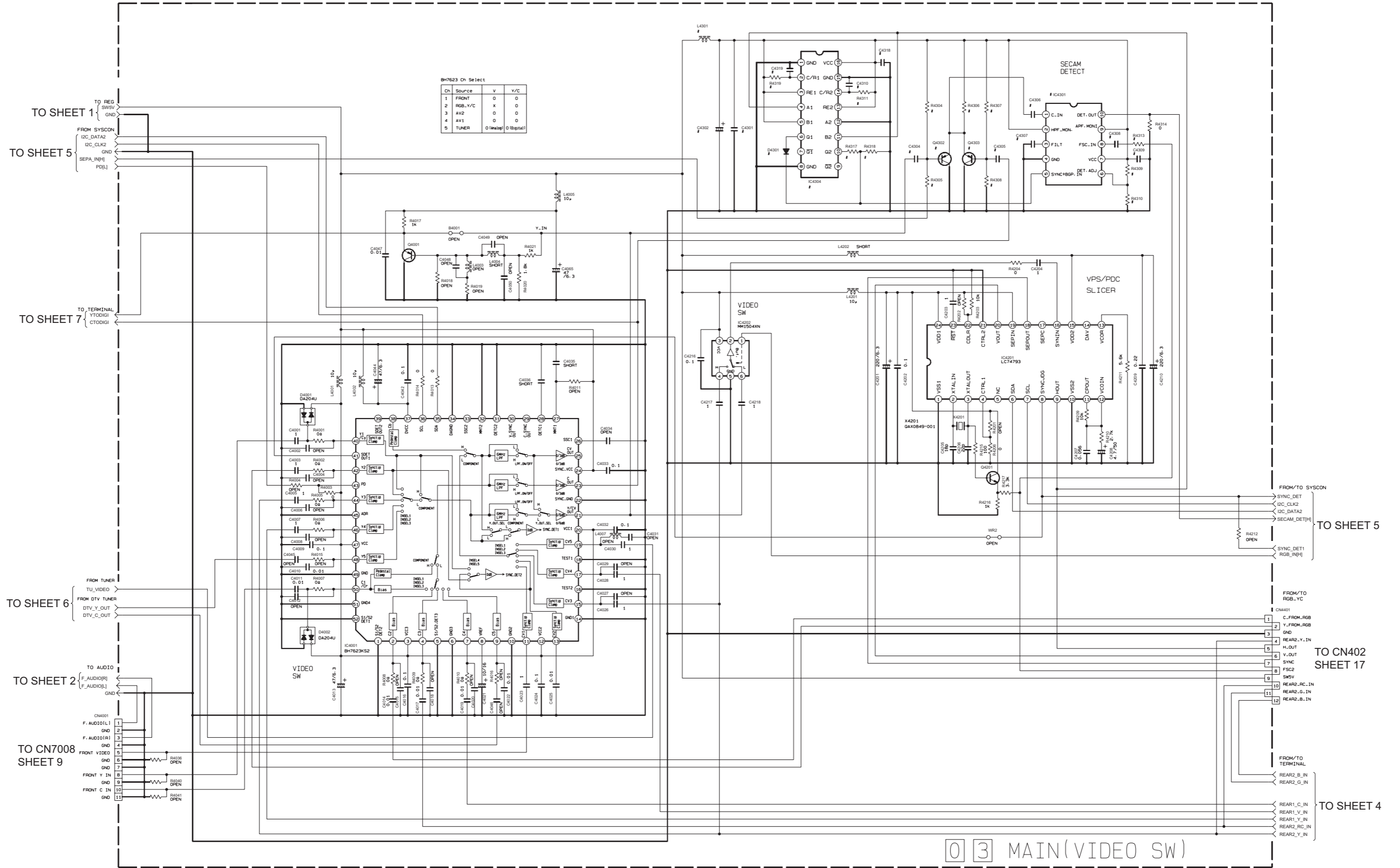


03 MAIN(AUDIO)

NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

Video signal control section



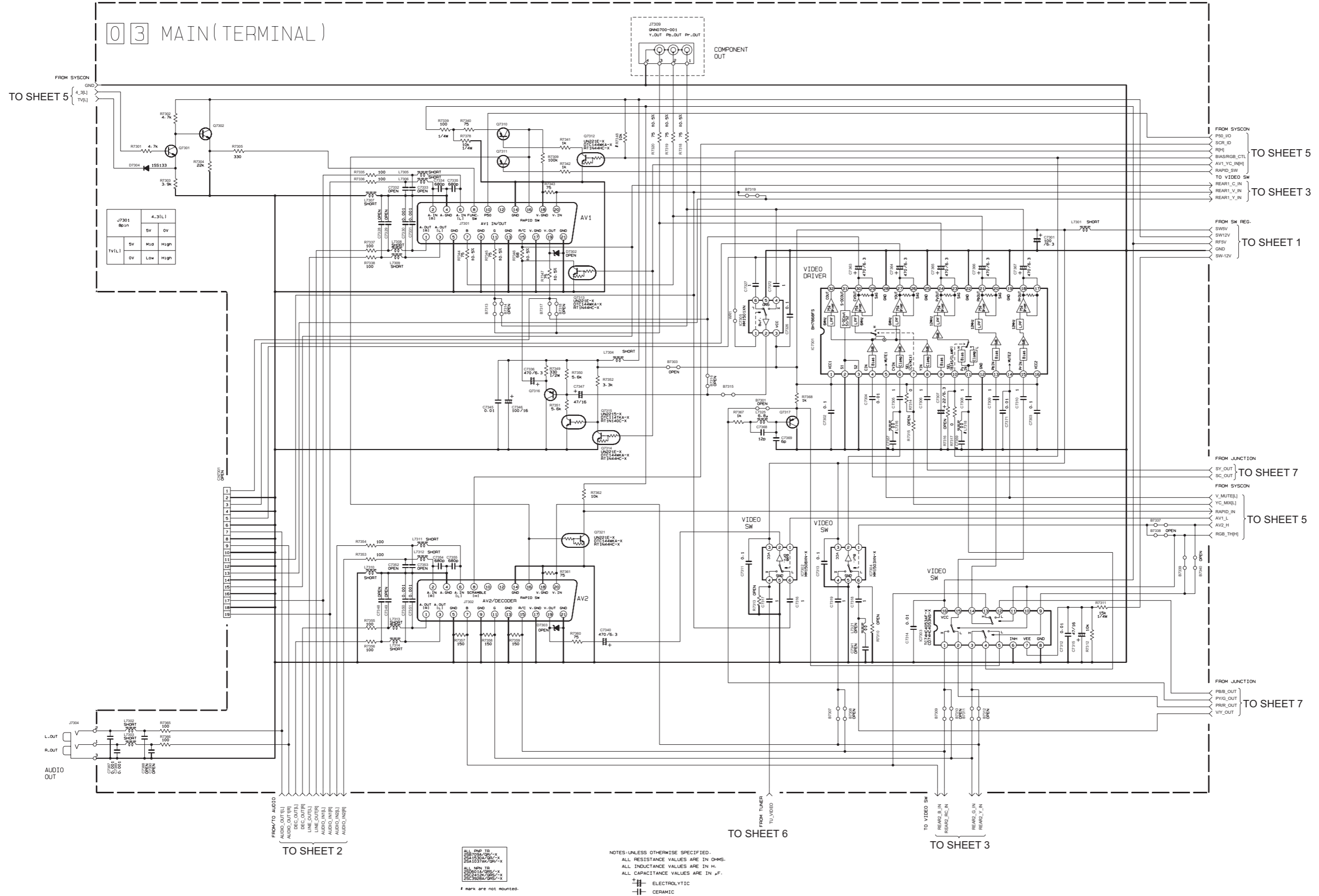
ALL PNP TR
S8709A/GR-X
S810374A/GR-X
2SA1530A/GR-X
ALL NPN TR
2SC9013A/GR-X
2SC9014A/GR-X
2SC9015A/GR-X
2SC9016A/GR-X
2SC9017A/GR-X
2SC9018A/GR-X
2SC9019A/GR-X
2SC9020A/GR-X
2SC9021A/GR-X
2SC9022A/GR-X
2SC9023A/GR-X
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2SC9082A/GR-X
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2SC9091A/GR-X
2SC9092A/GR-X
2SC9093A/GR-X
2SC9094A/GR-X
2SC9095A/GR-X
2SC9096A/GR-X
2SC9097A/GR-X
2SC9098A/GR-X
2SC9099A/GR-X
2SC9100A/GR-X

* mark are not mounted

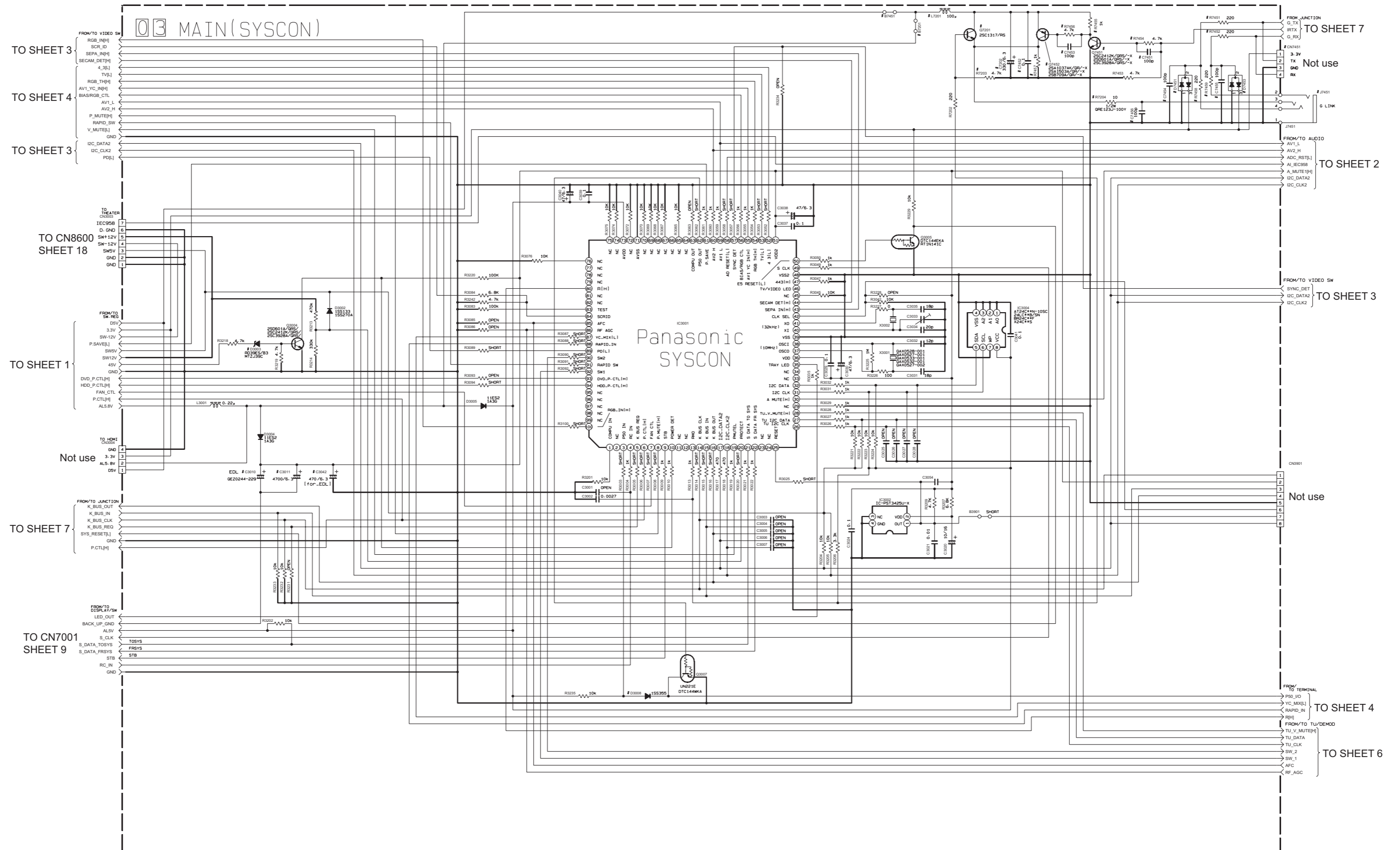
NOTES: UNLESS OTHERWISE SPECIFIED,
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

⊖ ELECTROLYTIC
⊖ CERAMIC

Input / output terminal section



System control section



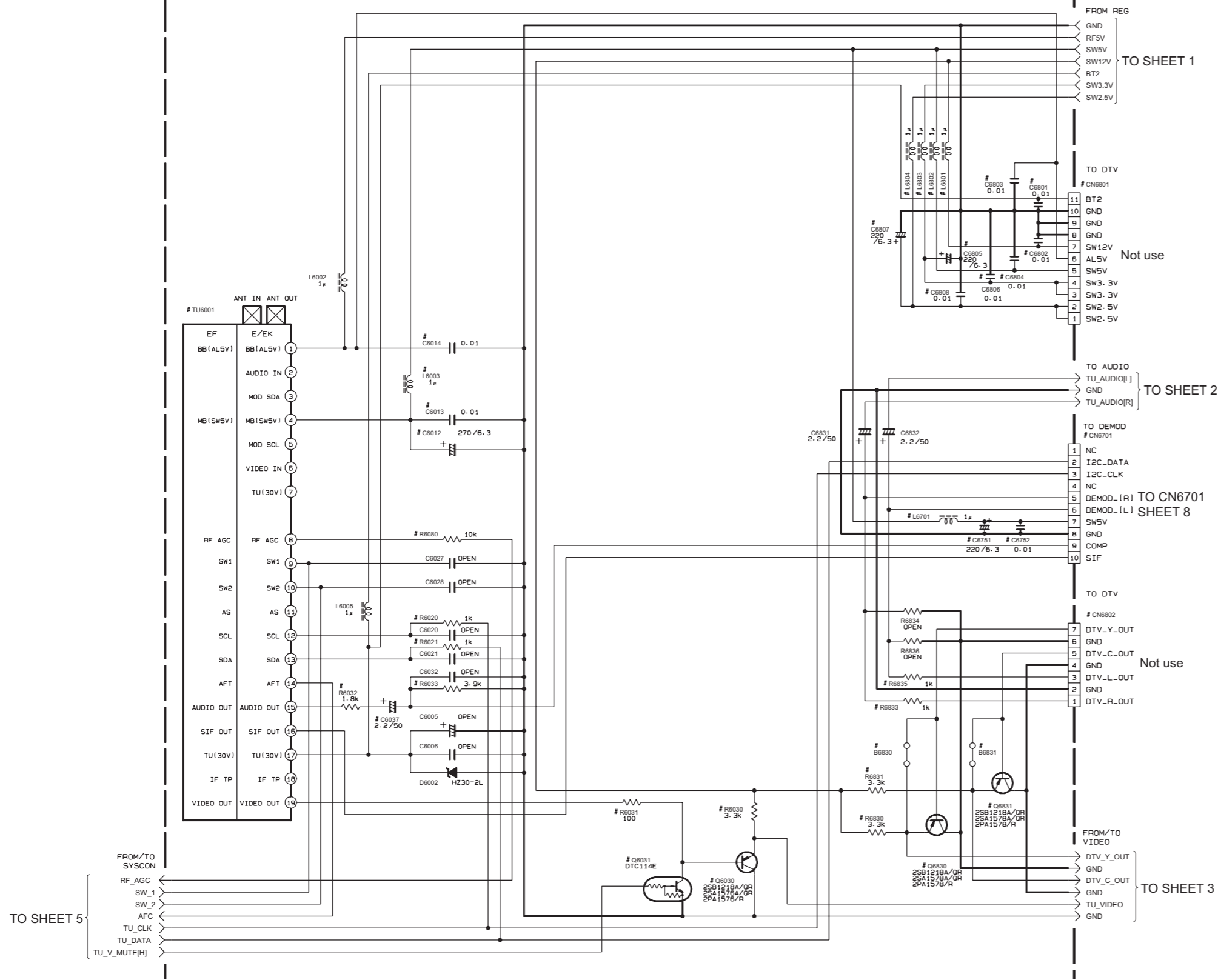
DIFFERENCE TABLE

	C. BOX	G. LINK
J7451, L7201, R7204, C7202, C7456, C7456	○	○
R7202, R7203, Q7201, B7201	○	x
R7451, R7452, R7453, R7454, R7455, R7456, R7457, R7458, R7459, R7460, R7461, R7462, R7463, R7464, R7465, R7466, R7467, R7468, R7469, R7470, R7471, R7472, R7473, R7474, R7475, R7476, R7477, R7478, R7479, R7480, R7481, R7482, R7483, R7484, R7485, R7486, R7487, R7488, R7489, R7490, R7491, R7492, R7493, R7494, R7495, R7496, R7497, R7498, R7499, R7500	x	○

NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
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 ⊕ ELECTROLYTIC
 ⊖ CERAMIC
 ⊖ MYLER
 ⊖ NON POLAR

■ Tuner section

03 TUNER [MAIN]



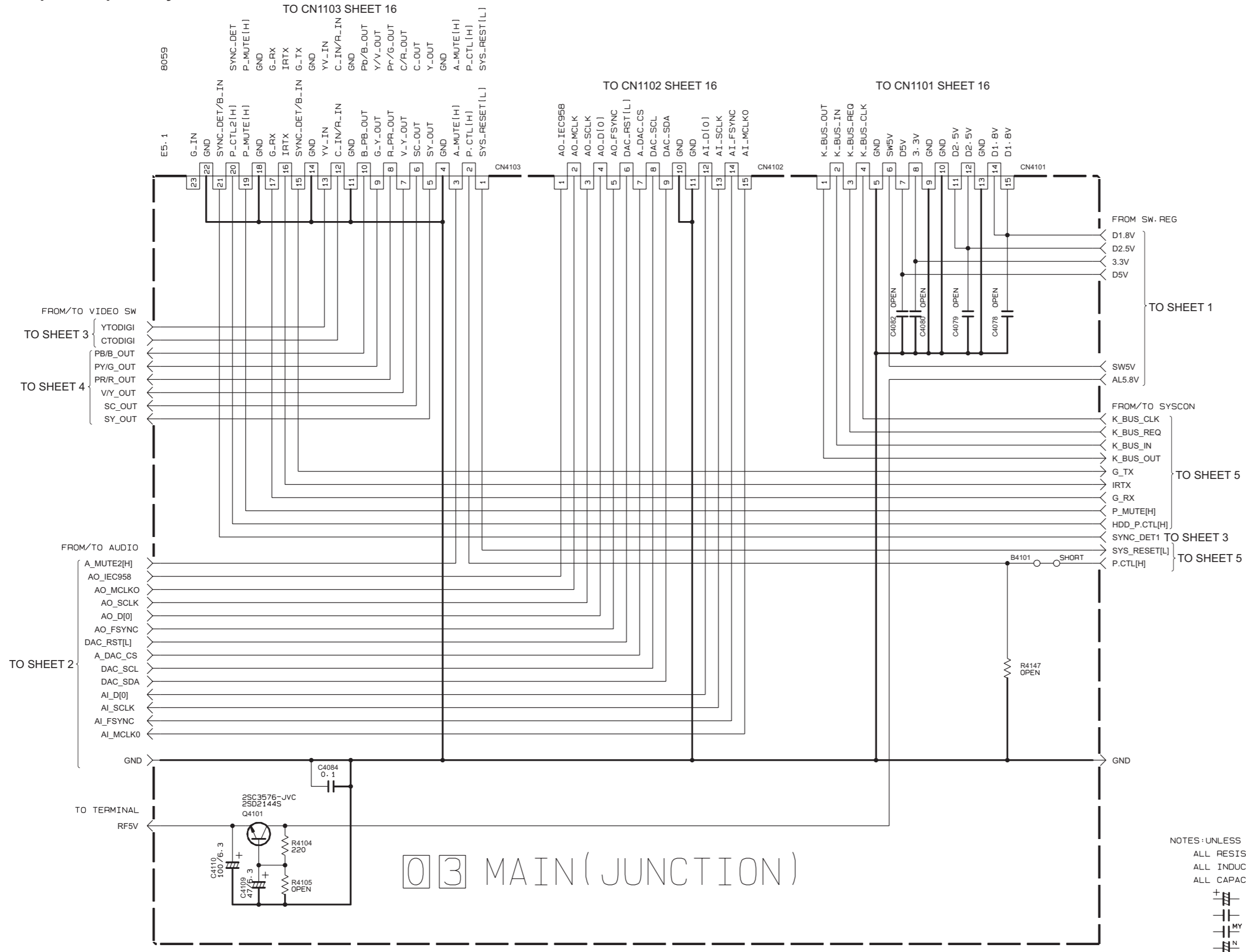
DIFFERENCE TABLE

FUNCTION	SYMBOL	THR1,THR3	
		EF	EK,EL,ER EU,EY,EZ
ANALOG TUNER			
TUNER	TU6001	SAMSUNG GAU0402	SAMSUNG GAU0401
BB(AL5V)	C6014	○	○
MB(SW5V)	L6003	○	○
	C6012	○	×
	C6013	○	○
RF AGC	R6080	○	○
SCL	R6020	○	○
SDA	R6021	○	○
AUDIO OUT	R6032	○	○
	R6033	○	×
	C6037	○	○
	C6030	○	○
VIDEO OUT	R6030	○	○
	R6031	○	○
	Q6030	○	○
VIDEO MUTE	Q6031	×	×
DEMOD			
VCC	L6701	○	○
	C6751	×	×
	C6752	×	×
DEMOD UNIT	CN6701	○	○
DIGITAL TUNER			
REG	CN6801	×	×
BT2	C6801	×	×
SW12V	L6801	×	×
	C6802	×	×
AL5V	C6803	×	×
	L6802	×	×
SW5V	L6802	×	×
	C6804	×	×
	L6803	×	×
SW3.3V	C6805	×	×
	C6806	×	×
	L6804	×	×
SW2.5V	L6804	×	×
	C6807	×	×
	C6808	×	×
SIGNAL	CN6802	×	×
Y OUT	R6830	×	×
	Q6830	×	×
C OUT	R6831	×	×
	Q6831	×	×
L OUT	R6831	×	×
	B6831	×	×
R OUT	R6833	×	×

NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

Input / output relay section



NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

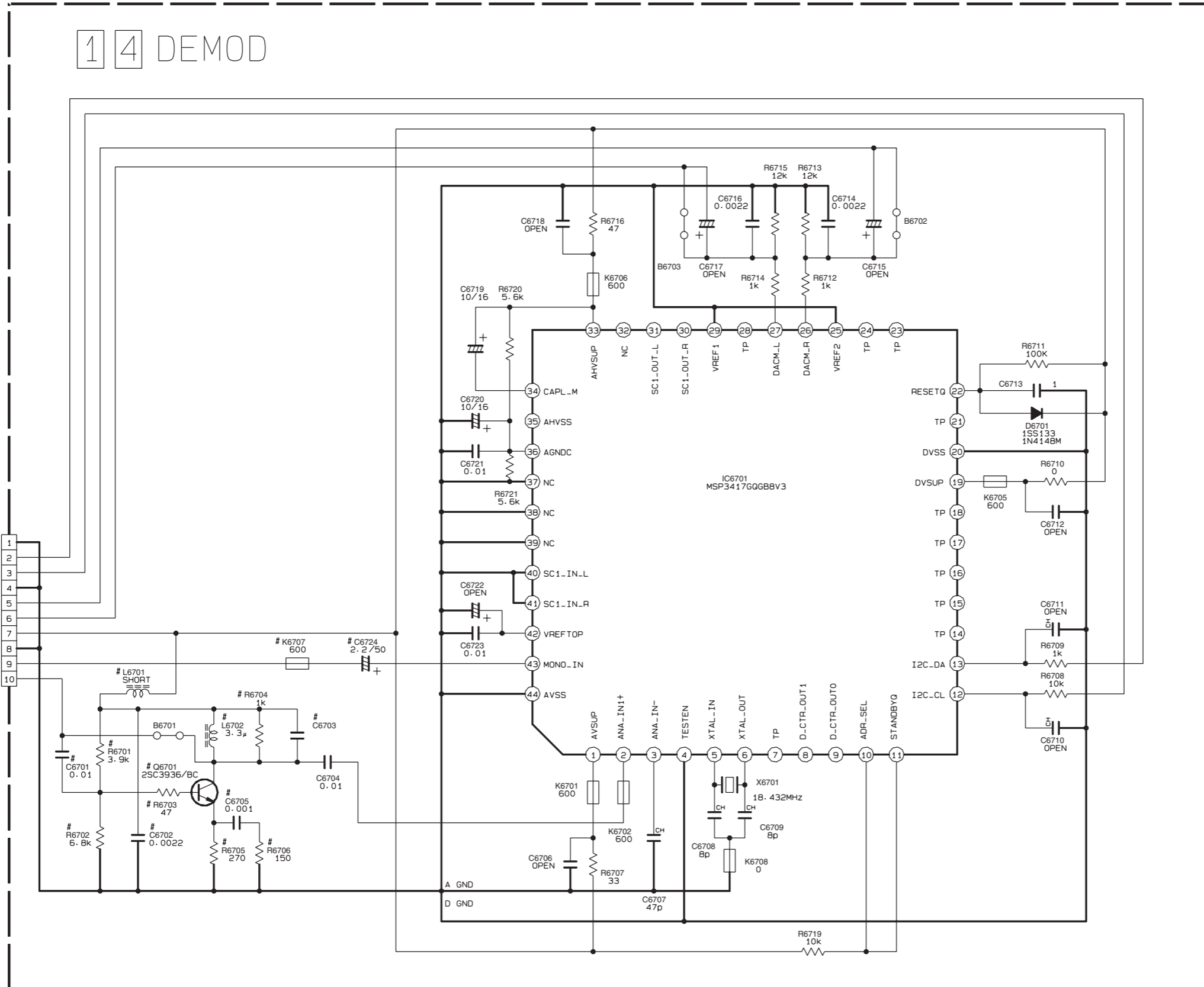
Demodulator section

1 4 DEMOD

TO MAIN
CN6701

GND 1
I2C_DATA 2
I2C_CLK 3
GND 4
DEMOD_(R) 5
DEMOD_(L) 6
SW5V 7
GND 8
COMP 9
SIF 10

TO CN6701
SHEET 6



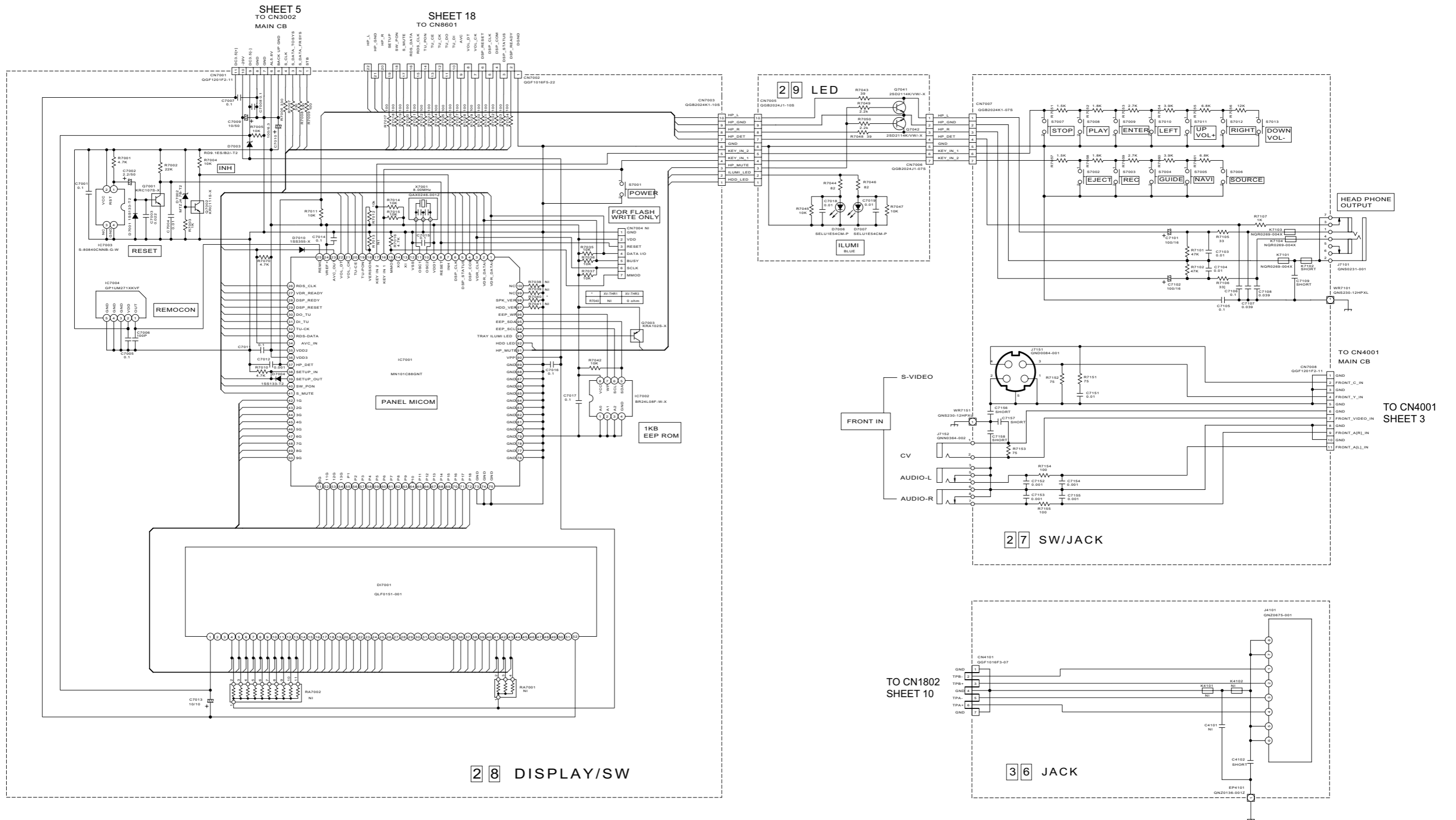
NOTES: UNLESS OTHERWISE SPECIFIED.
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ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

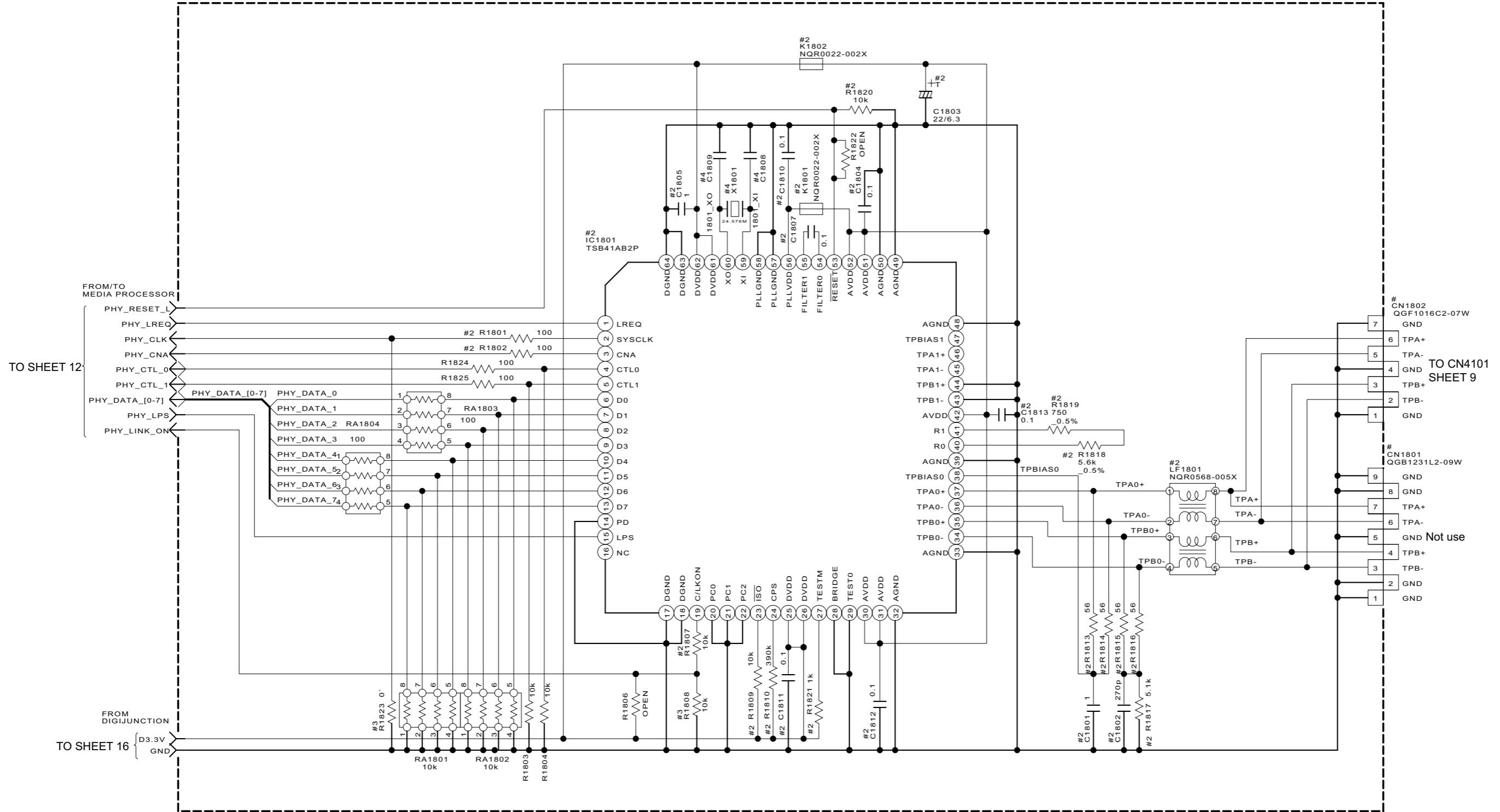
DIFFERENCE TABLE

FUNCTION	SYMBOL	EU/EK/AA/AG	EF
PREAMP	R6701-R6704, R6705, R6706, C6701-C6703, C6705, L6702, Q6701	X	X
MONO IN	C6724, K6707	X	O

FL display and operation switch section



IEEE 1394 section



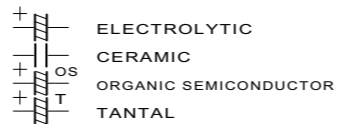
# MARK	Ref	CN1801	CN1802
THEATER	Dest Key	NO	YES
OTHER	Dest Key	YES	NO

#4 MARK	Ref	X1801	C1808 C1809
NTSC	Dest Key	NAX0666-001X	12p
PAL	Dest Key	NAX0773-001X	7p

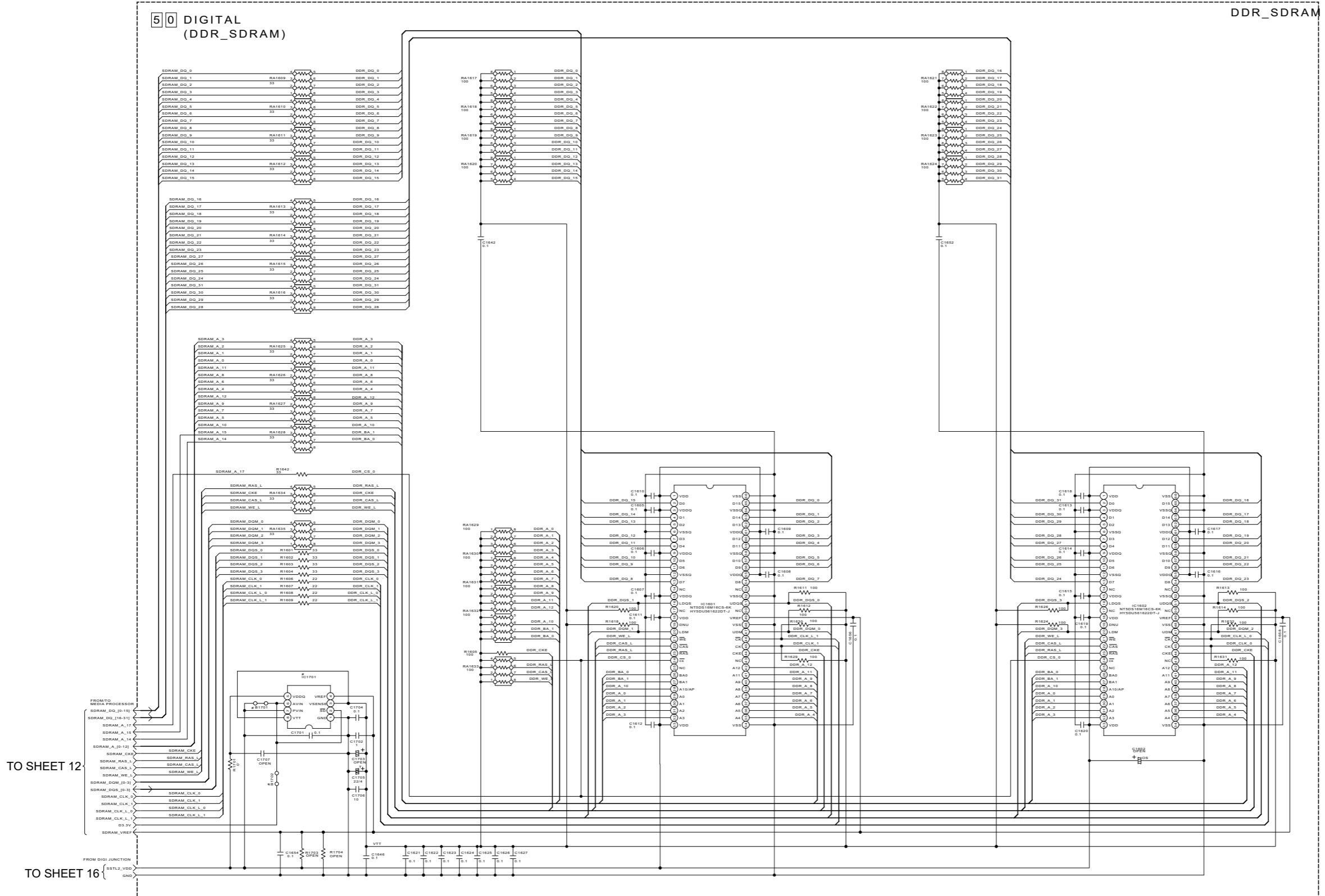
DIFFERENCE TABLE	Ref	#2_MARK #2_MARK #4_MARK	#3_MARK
DV_IN	Dest Key	YES	NO
NO_DV_IN	Dest Key	NO	YES

NOTES: UNLESS OTHERWISE SPECIFIED

ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN F.



■ DDR SDRAM section

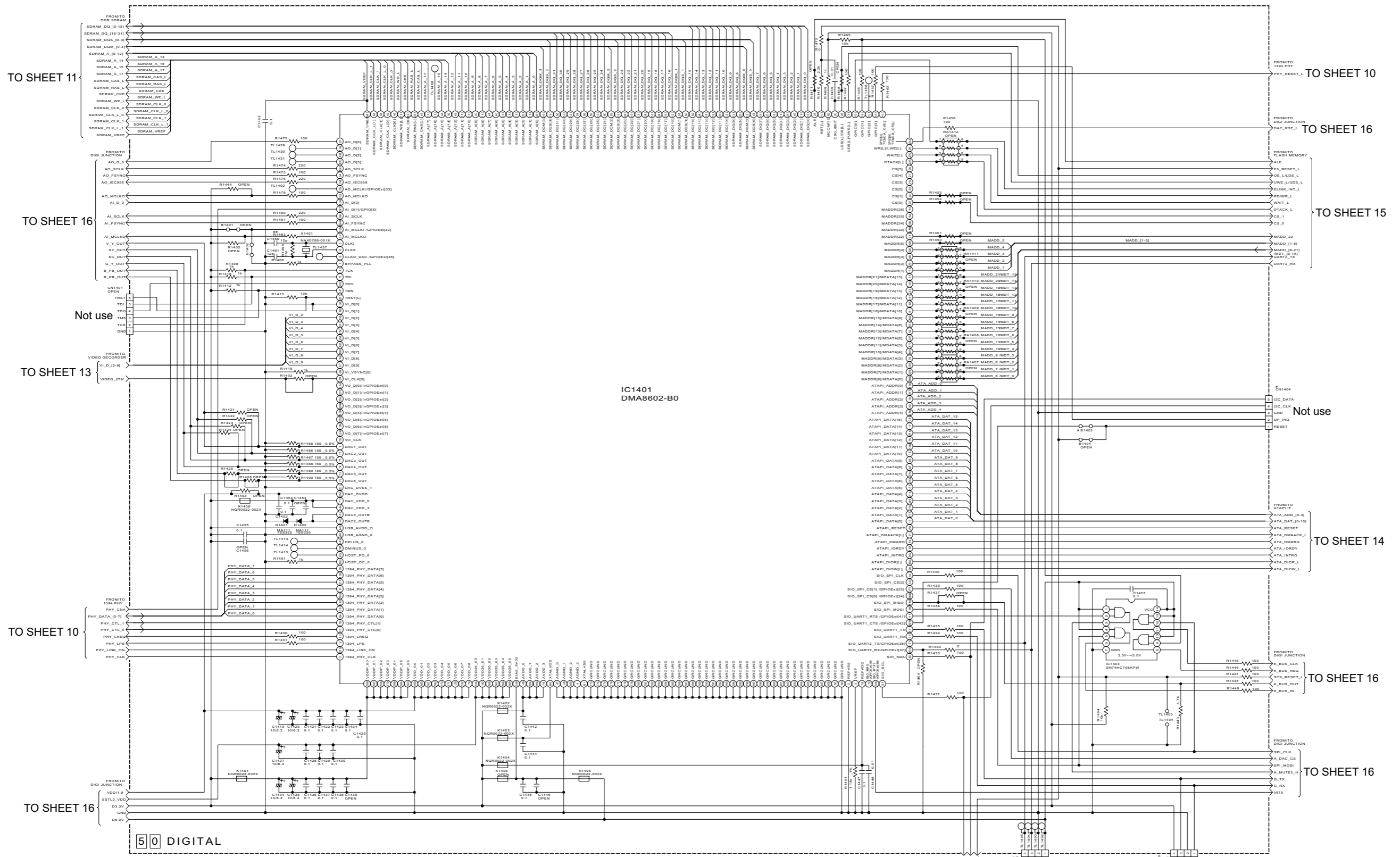


MARK	IC1701	B1701	B1702
DDR	NO	YES	NO
NTIC	LP2986MR.X	YES	NO
PAL	SD3333P.X	NO	YES

NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS
 ALL INDUCTANCE VALUES ARE IN nH
 ALL CAPACITANCE VALUES ARE IN pF

ELECTROLYTIC
 CERAMIC
 ORGANIC SEMICONDUCTOR
 TANTALUM

Media processor section

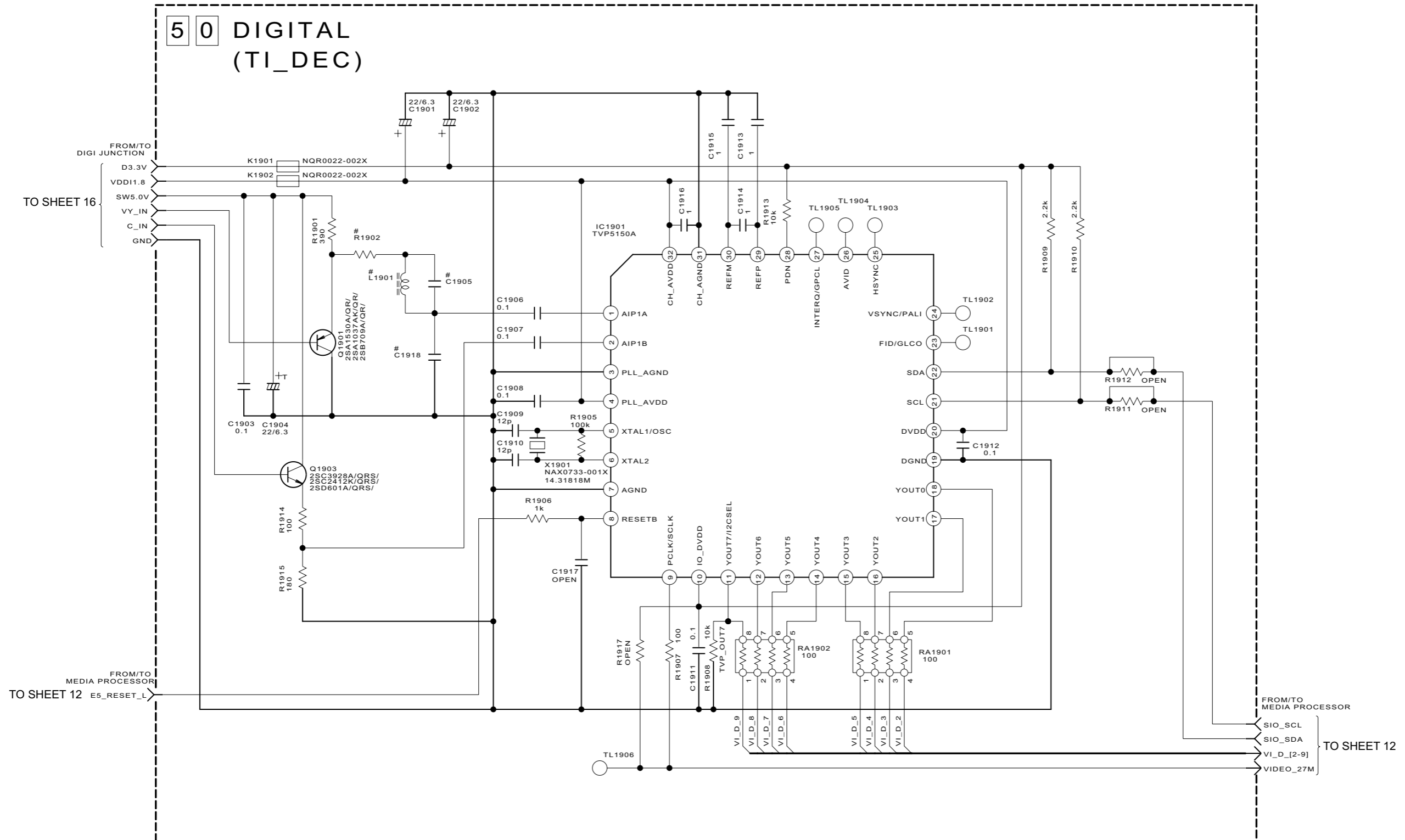


50 DIGITAL

REF	MARK	REF	MARK	REF	MARK
R1400	100	R1401	100	R1402	100
R1403	100	R1404	100	R1405	100
R1406	100	R1407	100	R1408	100
R1409	100	R1410	100	R1411	100
R1412	100	R1413	100	R1414	100
R1415	100	R1416	100	R1417	100
R1418	100	R1419	100	R1420	100
R1421	100	R1422	100	R1423	100
R1424	100	R1425	100	R1426	100
R1427	100	R1428	100	R1429	100
R1430	100	R1431	100	R1432	100
R1433	100	R1434	100	R1435	100
R1436	100	R1437	100	R1438	100
R1439	100	R1440	100	R1441	100
R1442	100	R1443	100	R1444	100
R1445	100	R1446	100	R1447	100
R1448	100	R1449	100	R1450	100
R1451	100	R1452	100	R1453	100
R1454	100	R1455	100	R1456	100
R1457	100	R1458	100	R1459	100
R1460	100	R1461	100	R1462	100
R1463	100	R1464	100	R1465	100
R1466	100	R1467	100	R1468	100
R1469	100	R1470	100	R1471	100
R1472	100	R1473	100	R1474	100
R1475	100	R1476	100	R1477	100
R1478	100	R1479	100	R1480	100
R1481	100	R1482	100	R1483	100
R1484	100	R1485	100	R1486	100
R1487	100	R1488	100	R1489	100
R1490	100	R1491	100	R1492	100
R1493	100	R1494	100	R1495	100
R1496	100	R1497	100	R1498	100
R1499	100				

NOTES UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN μH.
 ALL CAPACITANCE VALUES ARE IN pF.
 ELECTROLYTIC
 CERAMIC
 ORGANIC SEMICONDUCTOR
 TANTAL

Video decoder section

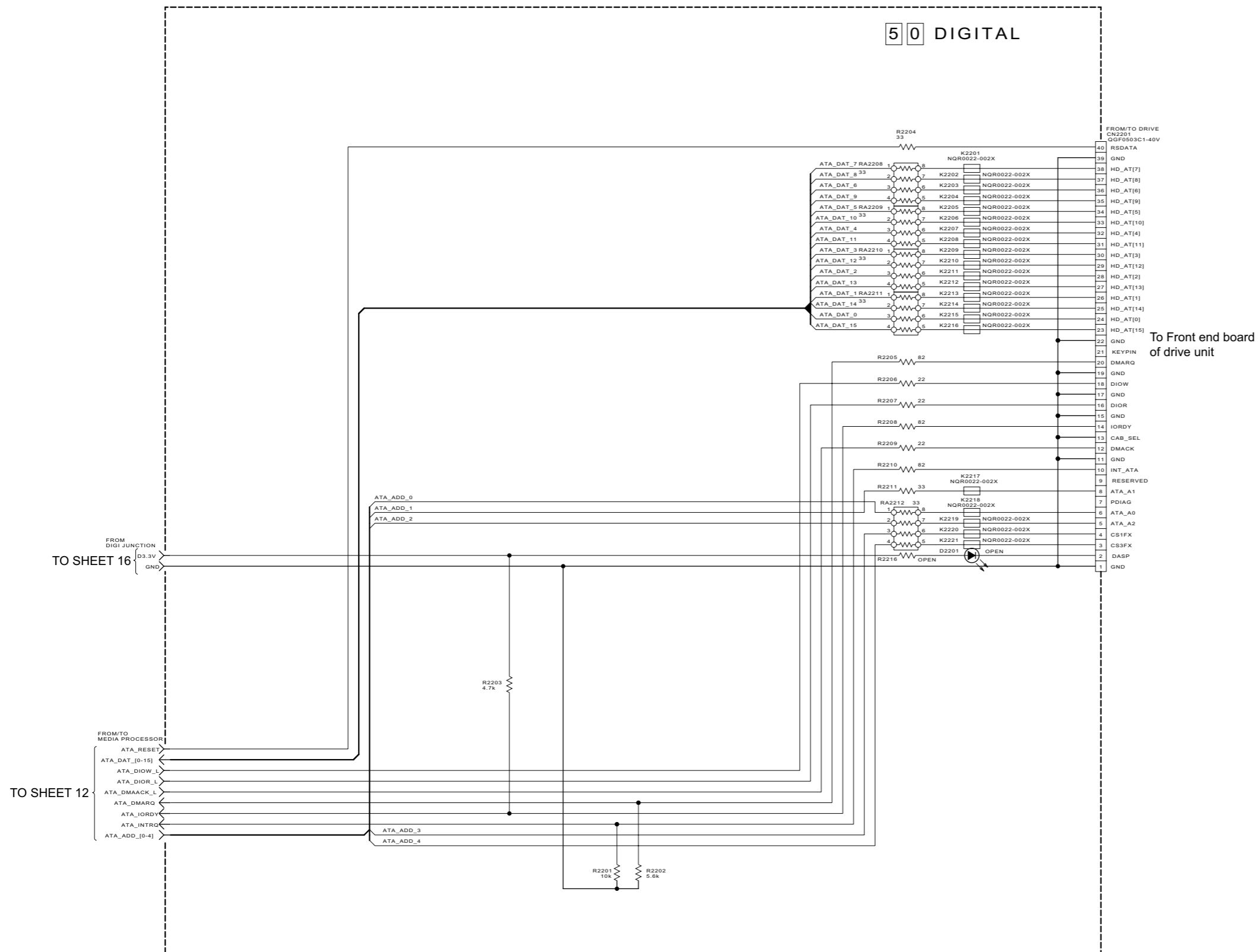


# MARK	Ref	R1902	L1901	C1905	C1918
Dest Key					
NTSC	0'	0'	OPEN	0'	OPEN
PAL	100	100	1.8u	5p	100p

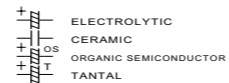
NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN F.

ELECTROLYTIC
 CERAMIC
 ORGANIC SEMICONDUCTOR
 TANTAL

■ ATAPI interface section

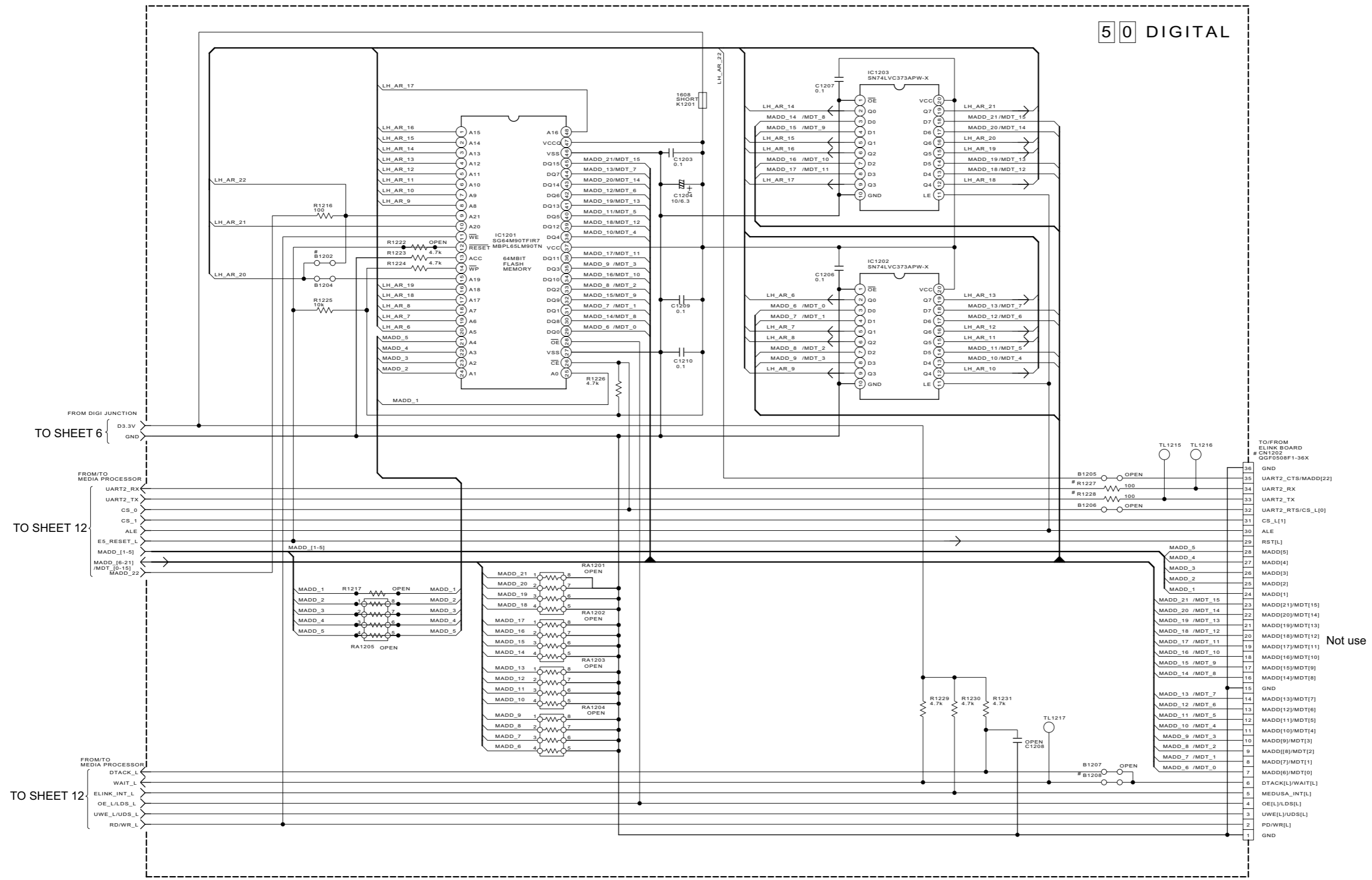


NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN F.



FLASH-ROM section

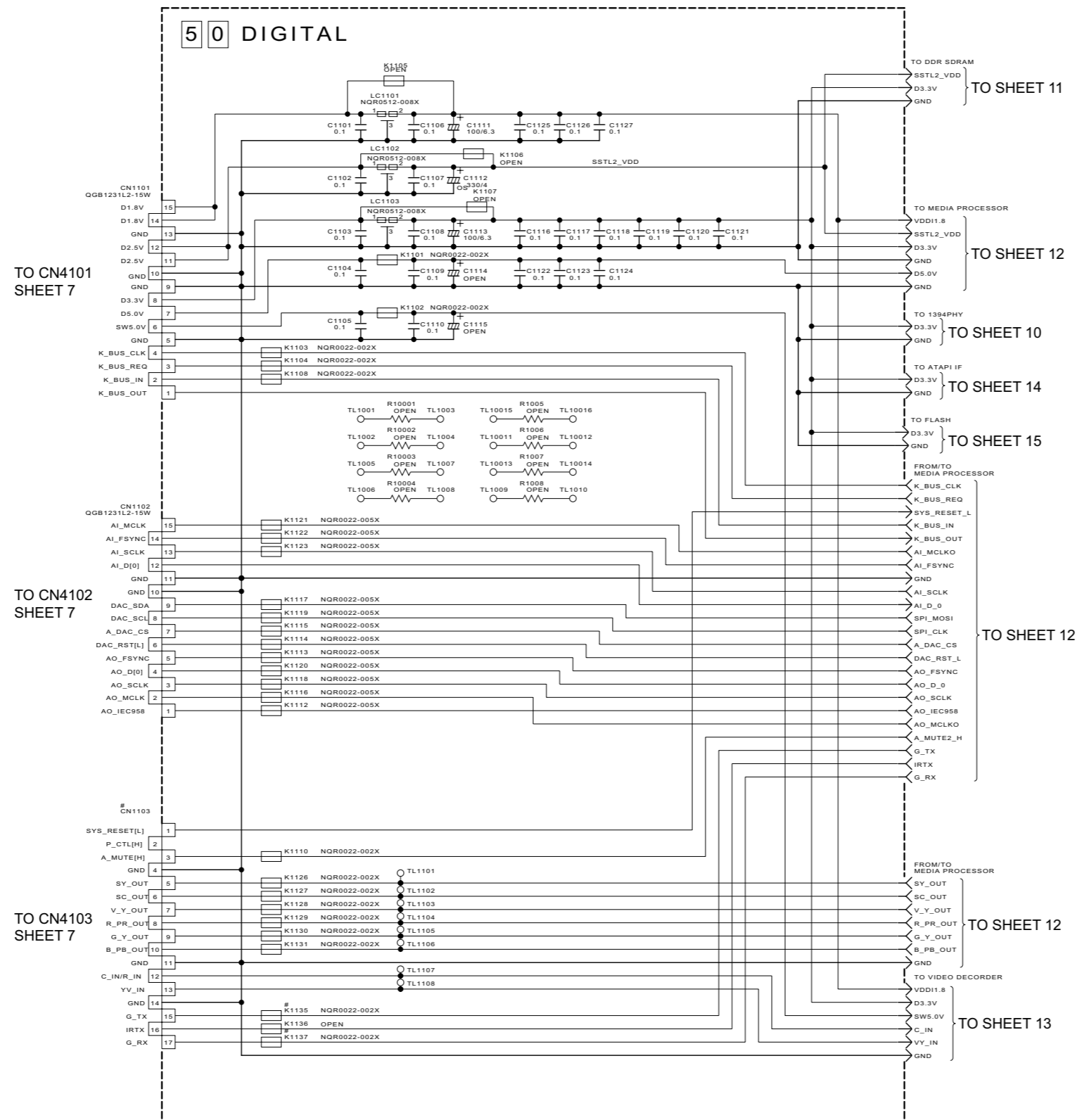
50 DIGITAL



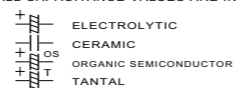
NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN F.
 # MARK ARE NOT MOUNTED.

ELECTROLYTIC
 CERAMIC
 ORGANIC SEMICONDUCTOR
 TANTAL

■ Digital junction section

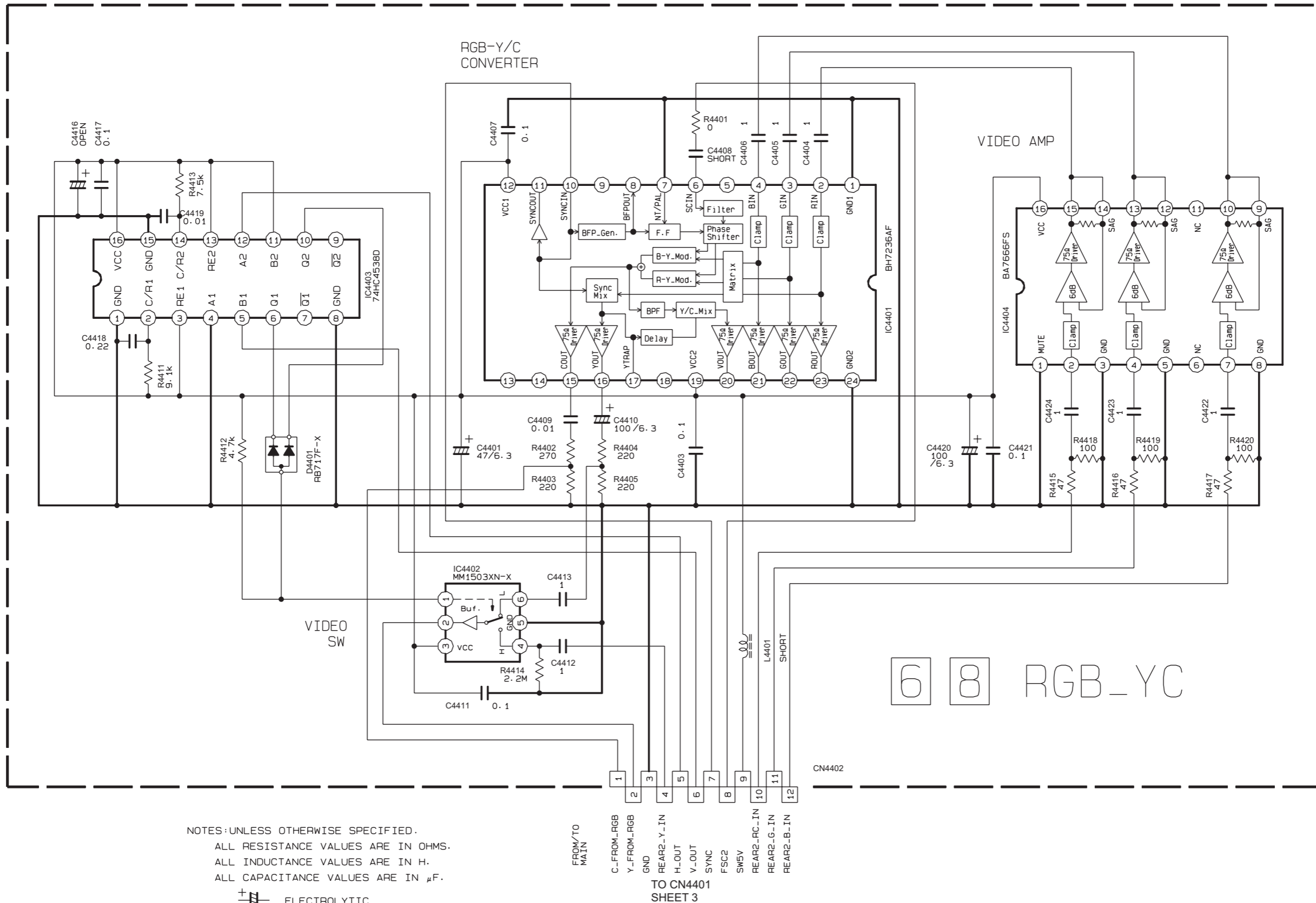


NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN F.



# MARK	Ref	
	CN1103	K1136 K1137
DR-MV5	GGF1016C2-17W	YES
OTHER	GGF1016C2-15W	NO

■ RGB - Y/C converter section



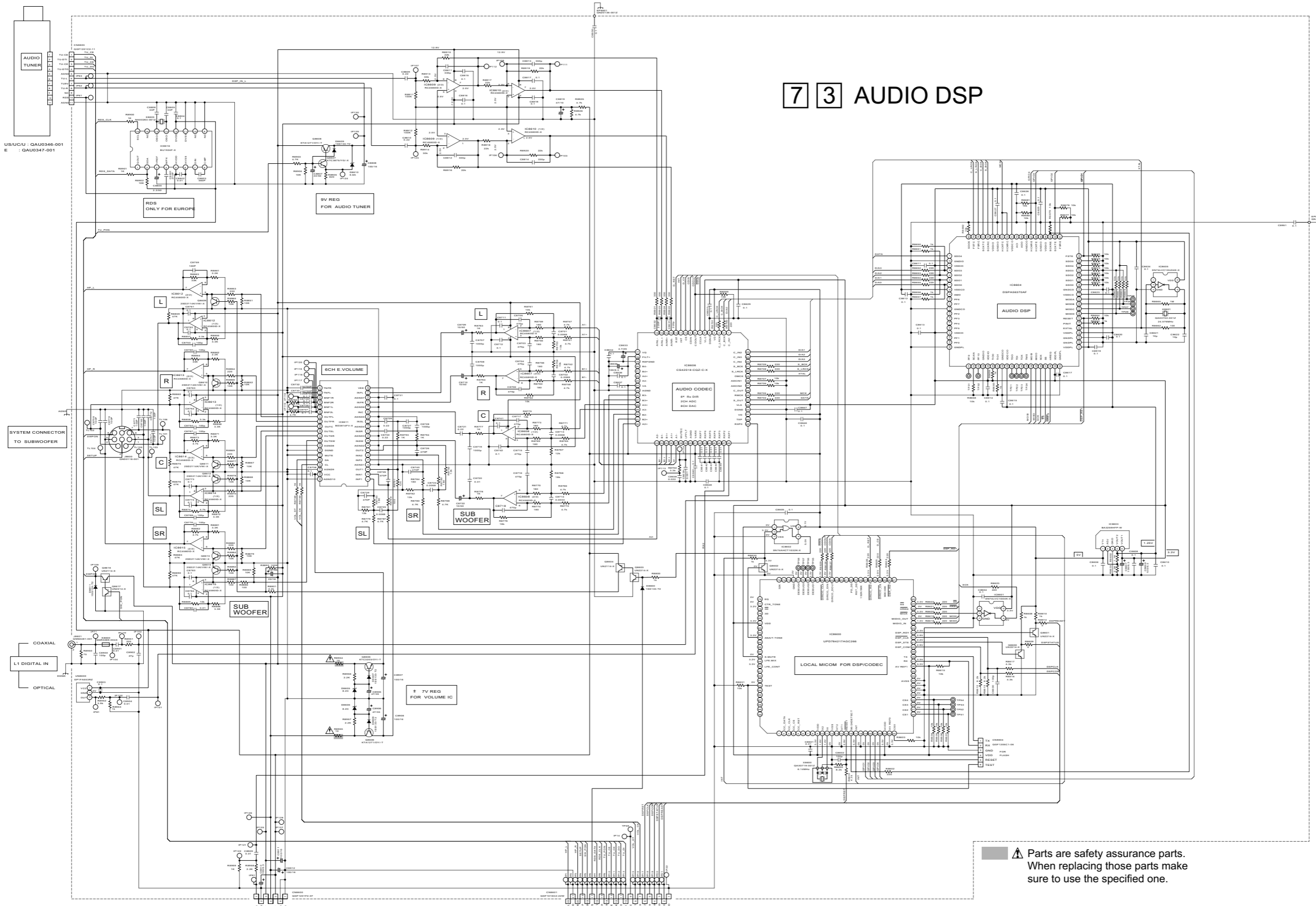
NOTES: UNLESS OTHERWISE SPECIFIED.
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 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.

ELECTROLYTIC
 CERAMIC

FROM/TO MAIN
 1 C.-FROM-RGB
 2 Y.-FROM-RGB
 3 GND
 4 REAR2-Y-IN
 5 H-OUT
 6 V-OUT
 7 SYNC
 8 FSC2
 9 SW5V
 10 REAR2-RC-IN
 11 REAR2-G-IN
 12 REAR2-B-IN
 TO CN4401
 SHEET 3

■ Audio DSP section

7 3 AUDIO DSP



US/JCU : GAU0346-001
E : GAU0347-001

RDS ONLY FOR EUROPE

4V REG FOR AUDIO TUNER

SYSTEM CONNECTOR TO SUBWOOFER

6CH E.VOLUME

SUB WOOFER

SUB WOOFER

7V REG FOR VOLUME IC

AUDIO CODEC

AUDIO DSP

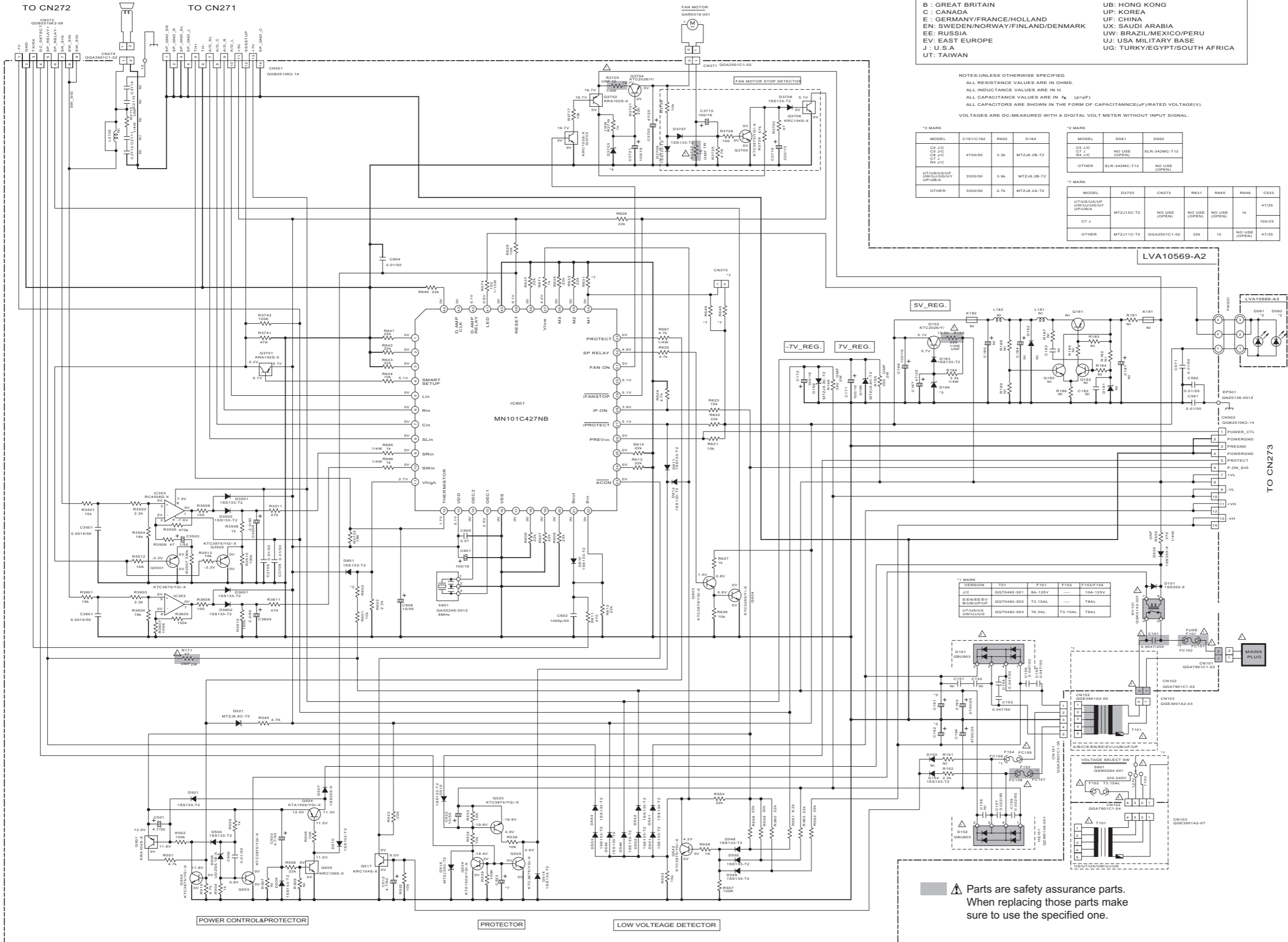
LOCAL MICOM FOR DSP/CODEC

TO CN3003 SHEET 5

TO CN7002 SHEET 9

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

Subwoofer primary section



VERSION

A : AUSTRALIA	US : SINGAPOLE
B : GREAT BRITAIN	UB : HONG KONG
C : CANADA	UF : KOREA
E : GERMANY/France/HOLLAND	UF : CHINA
EN : SWEDEN/NORWAY/FINLAND/DENMARK	UX : SAUDI ARABIA
EE : RUSSIA	UW : BRAZIL/MEXICO/PERU
EV : EAST EUROPE	UJ : USA MILITARY BASE
J : U.S.A	UG : TURKEY/EGYPT/SOUTH AFRICA
UT : TAIWAN	

NOTES: UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H. (PpH)
 ALL CAPACITANCE VALUES ARE IN P (PpF)
 ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (uF)/RATED VOLTAGE (V).
 VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.

*3 MARK				*2 MARK			
MODEL	C161/C162	R602	D184	MODEL	D561	D562	
C4 J/C	4700/50	3.3k	MTZJ6.2B-T2	C5 J/C	NO USE (OPEN)	SLR-342MC-T12	
C6 J/C				R4 J/C	NO USE (OPEN)		
C7 J/C				OTHER	SLR-342MC-T12	NO USE (OPEN)	
UT/US/UK/UF/UP/UB/UA	3300/50	3.9k	MTZJ6.2B-T2				
OTHER	3300/50	2.7k	MTZJ6.2A-T2				

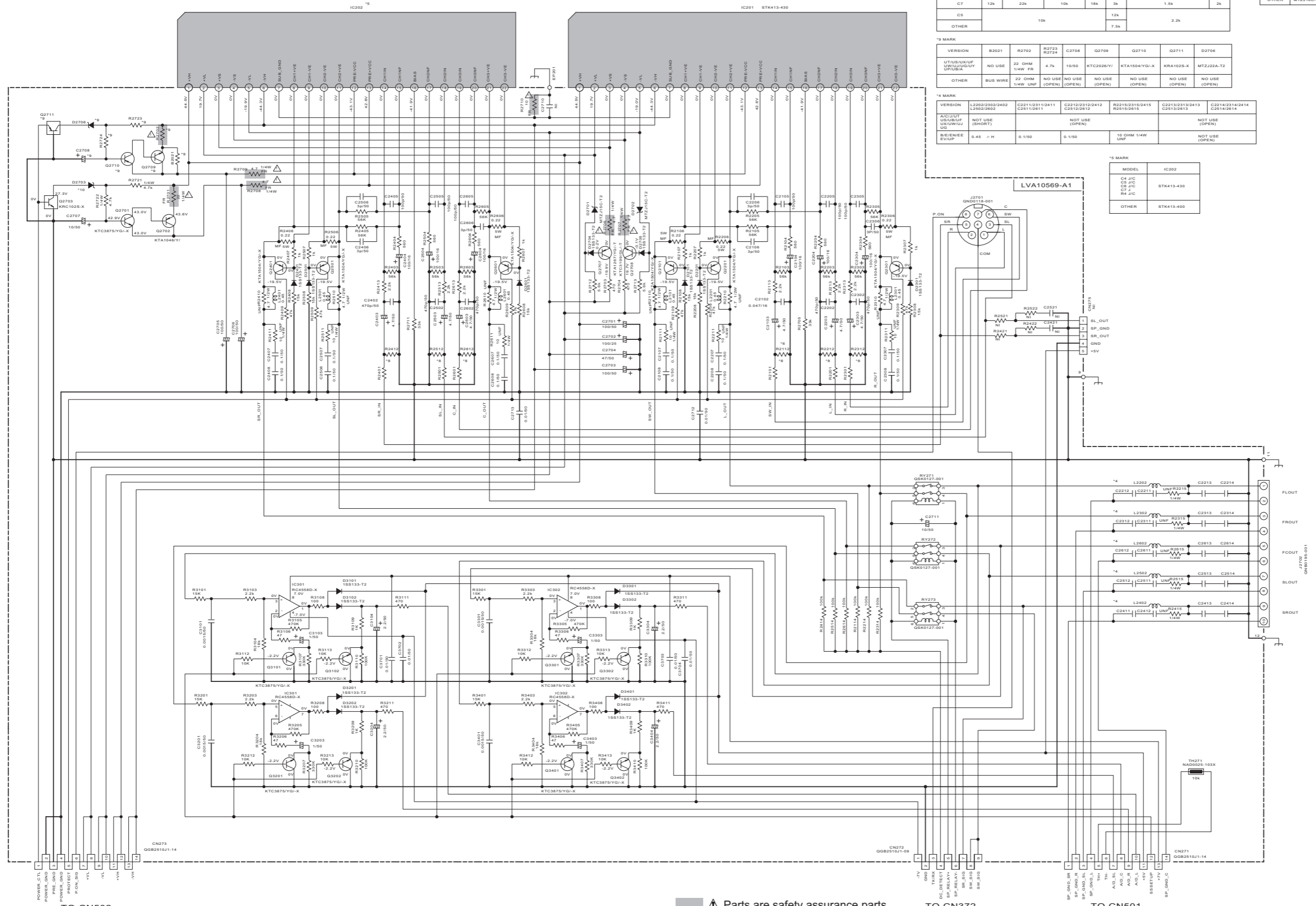
*7 MARK						
MODEL	D3703	CN373	R631	R645	R646	C523
UT/US/UK/UF/UP/UB/UA	MTZJ15C-T2	NO USE (OPEN)	NO USE (OPEN)	NO USE (OPEN)	1k	47/25
C7 J						100/25
OTHER	MTZJ11C-T2	GQA2501C1-02	22k	1k	NO USE (OPEN)	47/25

*1 MARK

VERSION	T01	F101	F102	F153/F154
J/C	GQT0482-001	8A-125V	16A-125V
E/E/EE/VEV	GQT0482-002	T3.15AL	TBAL
UT/US/UK/UP/UB/UA	GQT0482-003	T6.3AL	T3.15AL	TBAL
UW/US/UK/UG	GQT0482-003	T6.3AL	T3.15AL	TBAL

⚠ Parts are safety assurance parts.
 When replacing those parts make sure to use the specified one.

Subwoofer amplifier section



***8 MARK**

VERSION	R2101	R2201	R2301	R2401	R2501	R2601	R2112	R2212	R2312	R2412	R2512	R2612
UT/US/UK/UP UN/US/UY/UY UP/UB/A	18k			27k			7.5k			3.9k		
C7	12k	22k		10k	18k	3k			1.5k		2k	
C5							12k					
OTHER				10k						2.2k		

***10 MARK**

MODEL	D2703
C7	MTZ13B-T2
OTHER	MTZ16C-T2

***9 MARK**

VERSION	B2021	R2702	R2723	C2708	Q2709	Q2710	Q2711	D2708
UT/US/UK/UP UN/US/UY/UY UP/UB/A	NO USE	22 OHM 1/4W FR	4.7k	10/50	KTC2028/Y	KTA1054/YG-X	KRA1025-X	MTZ22A-T2
OTHER	BUS WIRE	22 OHM 1/4W UNF	NO USE (OPEN)	NO USE (OPEN)	NO USE (OPEN)	NO USE (OPEN)	NO USE (OPEN)	NO USE (OPEN)

***4 MARK**

VERSION	L2002/2302/2402 L2002/2302	C2112/2311/2411 L2002/2302	C2112/2312/2412 C2112/2312	R2215/2315/2415 R2115/2315	C2215/2315/2415 C2112/2312	C2214/2314/2414 C2114/2314
A/C/D/E/J/T U/L/W/U/V/J U/D	NOT USE (SHORT)		NOT USE (OPEN)		NOT USE (OPEN)	NOT USE (OPEN)
B/E/EN/EE E/V/UP	0.45 -H	0.1/50	0.1/50		18 OHM 1/4W UNF	NOT USE (OPEN)

***5 MARK**

MODEL	IC202
C4 J/C C5 J/C C6 J/C C7 J/C R4 J/C	STK413-430
OTHER	STK413-400

NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F. (ppF)
 ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μ F)/RATED VOLTAGE(V).
 VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.

⚠ Parts are safety assurance parts.
 When replacing those parts make
 sure to use the specified one.